

# **The Boyle Papers**

Understanding the Manuscripts of  
Robert Boyle

**Michael Hunter**

with contributions by  
Edward B. Davis, Harriet Knight,  
Charles Littleton and  
Lawrence M. Principe



# THE BOYLE PAPERS



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MICHAEL HUNTER

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EDWARD B. DAVIS, HARRIET KNIGHT,  
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- 12 Prefatory note and index to the chapters of Boyle's *Paralipomena*. In the hand of Robert (Robin) Bacon, with alterations in the hand of Hugh Greg. BP 36, fol. 4.
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- 15 Part of William Wotton's inventory of Boyle letters. BP 36, fols. 180v–1.
- 16 The first page of Henry Miles' 'List of Papers'. BP 36, fol. 157.

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A variety of intellectual debts have to be recorded here, stretching from the original cataloguing of the Boyle archive in the 1980s (as recorded in the 1992 recension of the catalogue) to the preparation of the revised version of it in 2004. In addition, obligations have been incurred in connection with each of the previously published papers included in this volume, and these, too, are itemised here. I also wish to acknowledge the generosity of the co-authors of the various papers that appear here in allowing them to be included: Lawrence M. Principe (chapter 2), Charles Littleton (chapters 3 and 4), Harriet Knight (chapter 4) and Edward B. Davis (chapter 5).

First, it seems appropriate to quote the 1992 acknowledgments verbatim:

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Chapter 1, 'Robert Boyle and his Archive'. The portions of this text that are derived from my 'Introduction' to *Letters and Papers of Robert Boyle: A Guide to the Manuscripts and Microfilm* (Bethesda, Md: University Publications of America, 1992) are Copyright 1992 LexisNexis Academic & Library Solutions, a division of Reed Elsevier Inc. All Rights Reserved. Used with permission. As noted at the appropriate point in the text, Lawrence M. Principe has generously given permission for his transcription of Henry Miles' list of 'bound books' and his table commenting on it to be printed as appendix 1 to this chapter.

Chapter 2, 'The Lost Papers of Robert Boyle'. This paper was originally published in *Annals of Science*, 60 (2003), 269–311, and it is reprinted by permission of Taylor & Francis <<http://www.tandf.co.uk>>. The co-author is Lawrence M. Principe of Johns Hopkins University, Baltimore. The authors are indebted to Edward B. Davis for his help in identifying items in the Boyle Papers, and to Trevor Levere for his assistance with the original publication of this paper.

Chapter 3, 'The Workdiaries of Robert Boyle: A Newly Discovered Source



and its Internet Publication'. This is an extended version of a paper originally published in *Notes and Records of the Royal Society*, 55 (2001), 373–90. The co-author is Charles Littleton of the History of Parliament Trust, London. The authors are grateful to Lawrence M. Principe for his comments on a draft of this article. As noted in the text, the project for publishing the workdiaries was funded by the Wellcome Trust, to which we are most grateful. We are also indebted to the library staff of the Royal Society for their continued help and encouragement. Harriet Knight kindly gave advice on appendix 1, and Sue Rodmell supplied transcriptions used in appendix 2.

Chapter 4, 'Robert Boyle's *Paralipomena*: An Analysis and Reconstruction', is hitherto unpublished. The co-authors are Harriet Knight of Queen Mary, University of London, and Charles Littleton.

Chapter 5, 'The Making of Robert Boyle's *Free Enquiry into the Vulgarly Receiv'd Notion of Nature* (1686)', was originally published in *Early Science and Medicine*, 1 (1996), 204–71, and is reprinted by permission of Brill Academic Publishers. The co-author is Edward B. Davis of Messiah College, Grantham, Pennsylvania. The following kindly assisted us in our research, and/or commented on all or part of this paper: Lawrence M. Principe, J.E. McGuire, John Henry, Guido Giglioni, Peter Elmer, Antonio Clericuzio and Peter Anstey. We are indebted to the library staff at the Royal Society for their help in our work on the Boyle Papers. The initial identification and collation of manuscripts relating to *A Free Enquiry* was assisted by the National Science Foundation under grant number DIR-8821955, awarded to Ted Davis in the summer of 1989. The later stages of the preparation of the paper were expedited by an institutional grant to Birkbeck College, University of London, from the Leverhulme Trust.

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# List of Abbreviations

Birch, <i>Royal Society</i>	Thomas Birch, <i>The History of the Royal Society of London</i> (4 vols., London, 1756–7)
BL	Boyle Letters
BP	Boyle Papers
<i>Correspondence</i>	Michael Hunter, Antonio Clericuzio and Lawrence M. Principe (eds.), <i>The Correspondence of Robert Boyle</i> (6 vols., London, 2001)
fol., fols.	folio, folios
HP	Hartlib Papers, University of Sheffield (for electronic edition, see p. 282)
Hunter, <i>Heads &amp; Inquiries</i>	Michael Hunter (ed.), <i>Robert Boyle's 'Heads' and 'Inquiries'</i> , Occasional Papers of the Robert Boyle Project, No. 1 (London, 2005)
Hunter & Knight, <i>Human Blood</i>	Michael Hunter and Harriet Knight (eds.), <i>Unpublished Material relating to Robert Boyle's 'Memoirs for the Natural History of Human Blood'</i> , Occasional Papers of the Robert Boyle Project, No. 2 (London, 2005)
MacIntosh	J.J. MacIntosh, <i>Boyle on Atheism</i> (Toronto, 2005)
MS, MSS	manuscript, manuscripts
<i>NRRS</i>	<i>Notes and Records of the Royal Society of London</i>
NS	New Style
<i>Oldenburg</i>	A.R. and M.B. Hall (eds.), <i>The Correspondence of Henry Oldenburg</i> (13 vols., Madison and London, 1965–86)
OS	Old Style
<i>Phil. Trans.</i>	<i>Philosophical Transactions</i>
Tbd, Tb'd	transcribed (manuscript annotation)
<i>Works</i>	Michael Hunter and Edward B. Davis (eds.), <i>The Works of Robert Boyle</i> (14 vols., London, 1999–2000)

For the short titles used for Boyle's works in footnotes, see below, pp. 285–9.  
For the principles used in transcribing manuscript texts, see *Works*, vol. 1, p. cii.



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## Introduction

# The Boyle Papers in Context

Robert Boyle (1627–91) was perhaps the most influential scientist in the late seventeenth century. His profuse extant manuscripts, which total over 20,000 leaves, constitute one of the most important archives to have come down to us from his period. The current volume brings together the fundamental materials for understanding the Boyle archive, which has been at the Royal Society since 1769. Until the 1980s, this treasure trove was virtually unexplored, but since then it has been painstakingly scrutinised and tabulated, and many key items from it have been published, not least in the definitive editions of Boyle's *Works* (14 volumes, 1999–2000) and *Correspondence* (6 volumes, 2001), both published by Pickering & Chatto, and the edition of his 'workdiaries' that has been available on the web since 2001.<sup>1</sup> Now, digitised facsimiles of substantial sections of the Boyle Papers have even been published online.<sup>2</sup> This makes this volume describing the archive and explaining its rationale all the more timely.

At its core is a complete catalogue of the Boyle collection of manuscripts. This deposit has three components. First, there are the forty-six volumes of the Boyle Papers, archivally arranged in the Victorian period and uniformly bound in either folio or quarto format. Then, there is a series of thirty-one separately bound manuscripts of smaller format, discrete volumes which were distributed among the general manuscript series at the Royal Society at an early date. Lastly, there are the Boyle Letters, comprising seven guardbooks of correspondence. The catalogue of this material, which takes up more than half of the present volume, is based on the catalogue of the archive published for the first time in 1992, in conjunction with the issue of a microfilm edition of the manuscripts in question by University Publications of America as part of their series 'Collections from the Royal Society'. The need for a revised version

---

1 Michael Hunter and Edward B. Davis (eds.), *The Works of Robert Boyle* (14 vols., London, 1999–2000); Michael Hunter, Antonio Clericuzio and Lawrence M. Principe (eds.), *The Correspondence of Robert Boyle* (6 vols., London, 2001); Michael Hunter and Charles Littleton (eds.), *The Workdiaries of Robert Boyle*, available online at <<http://www.livesandletters.ac.uk/wd>>.

2 These comprise the whole of the workdiaries at <<http://www.livesandletters.ac.uk/wd>>, and the entire content of the eleven core volumes of the Boyle Papers (namely vols. 2, 8–10, 17–18, 25–6, 28, 36 and 38) at <<http://www.bbk.ac.uk/boyle>>. Both were paid for by a generous grant from the Heritage Lottery Fund. See Michael Hunter, 'Robert Boyle for the 21st Century', *NRRS*, 59 (2005), 87–90.

of that catalogue will be apparent to anyone who has tried to use it in recent years: as they will have discovered, it has been a victim of its own success, having now been rendered virtually obsolete by the very exploitation which it made possible. In many cases, documents which could only be rather vaguely described in the original version can be identified as manuscript versions of parts of published works by Boyle; in other cases, the user can now be pointed to a published version of a previously unpublished text. Hence the new version of the catalogue offers the definitive guide to all sections of the collection and its content.

Hardly less important is the study that forms the first chapter of this volume, a revised version of the lengthy introduction which accompanied the original version of the catalogue published in 1992. This has various components. It opens by giving a brief account of Boyle's life and writings, together with a summary of modern writings on him: the latter has been updated to do justice to the renaissance in Boyle studies which has taken place over the past decade and a half. It then gives a definitive history of the archive, and of the arrangement of its component parts, from Boyle's time to ours. This indicates the role played by such early students of Boyle as the scholar William Wotton, who embarked on ambitious biography of Boyle which was never completed, and the nonconformist divine Henry Miles, who collaborated with the antiquary Thomas Birch in the preparation of a life of Boyle and a collected edition of his writings which appeared in 1744. It then moves on to give an account of the treatment of the manuscripts in Victorian and modern times.

The section that follows, dealing with dating and handwriting, is perhaps the most crucial for a proper understanding of the core section of the archive, the Boyle Papers. Until the 1980s, students of this collection were often frustrated by the lack of dating clues to its very miscellaneous content, with sections of text, notes and memoranda often being juxtaposed in an apparently almost random order. At that point, however, painstaking scrutiny of the different handwritings to be found within the archive, and particularly the hands of the numerous amanuenses whom Boyle employed at various stages in his career, made it possible to differentiate chronological strata within it. This was a crucial breakthrough, since it enabled material to be allocated to distinct phases in Boyle's intellectual development. Indeed, it would not be going too far to say that this revolutionised understanding of the archive, making possible the effective exploitation of its content which has since ensued. This section is presented here in revised and updated form, and the current version also improves on its predecessor in that a selection of facsimiles of various of the most typical handwritings in the archive has been provided for the reader's benefit.

The remainder of chapter 1 comprises a revised version of the section of the 1992 Introduction dealing with the 'content' of the archive – both the



material of Boyle's own that it contains, and also material by others – along with two appendices dealing with ancillary matters and a postscript which outlines the main holdings of Boyle manuscript material in other repositories. There was no equivalent to the latter in the original, 1992 version, but it seemed helpful to readers to provide it: apart from anything else, it reinforces the significance of the vast corpus that the Boyle collection represents, since it reveals that what survives elsewhere amounts to disappointingly little.

On the other hand, chapter 2 complicates matters, since its burden is that, substantial in size as is the extant Boyle archive, it represents only a part of what once existed. In fact, a considerable amount of the manuscript material left by Boyle at his death in 1691 has not survived, and this chapter, written in conjunction with Lawrence M. Principe and originally published in *Annals of Science* in 2003, gauges the scale and identity of these losses. To do so, it uses surviving inventories made by Henry Miles in the 1740s when he was collecting and sorting Boyle's literary remains in connection with the preparation of Birch's *Life and Works* of Boyle. These detailed lists are presented in fully annotated form as appendices to the chapter. Its text analyses their content, using the evidence of the inventories themselves along with ancillary sources to try to explain why (and when) the principal losses took place. It transpires that these were due to a variety of reasons, some deliberate, others accidental. In some case, items were disposed of because they were judged by eighteenth-century standards to be peripheral to the Boyle archive. In other cases, on the other hand, the losses were ironically of texts by Boyle in the most finished state: these were evidently destined for the Birch edition but failed to be published in it. These losses have significantly altered the character of the Boyle Papers, and thus the view of Boyle that is derived from them, and this needs to be taken into account both in interpreting and in exploiting the archive.

With chapter 3, we turn to a specific component of the archive, Boyle's 'workdiaries', his notes on his experiments and observations, and on data given him by others, a source of information that he evidently valued highly. These documents were until recently unknown, largely because they were scattered so widely and randomly through the Boyle Papers. However, they have now been reassembled, transcribed in full and published on the web, and this chapter, written in conjunction with Charles Littleton and originally published in *Notes and Records of the Royal Society* in 2001, gives an account both of the nature and content of this source, and of the history of the project for making it available in online form. The original article has here been extended to give additional information which was excluded from the original version on grounds of space. In addition, the account of the publication of the online edition has been updated to explain how its presentation has been improved at its new home on the website of the Centre for Editing Lives and Letters, <<http://www.livesandletters.ac.uk>>, while two appendices have been added:



one deals with extant indexes to the workdiaries, the other with recopied extracts from them that survive, in some cases evidently from examples of the genre which are otherwise lost.

Chapter 4 is a previously unpublished account of an ambitious project by Boyle to which he gave the title *Paralipomena*, aimed at making available in reorganised form the profuse data that he accumulated in the workdiaries and comparable compilations; this has been written in conjunction with Charles Littleton and Harriet Knight. After surveying the origins of Boyle's concern to allocate data to different headings – which evidently went back to the period following his initial surge of publication on natural philosophical topics in the 1660s – it looks in detail at the evolution of *Paralipomena* itself. In the course of doing so, it quotes at length both the lists of contents that Boyle composed, and the elaborate prefatory statements in which he explained the rationale of the project and gave details of its implementation. Also included are texts of the two sections of the work's substantive content which survive. The chapter ends with an assessment of Boyle's objectives in *Paralipomena* and the extent to which he succeeded in realising them. It concludes that, from the point of view of understanding Boyle's intellectual method, the exercise is none the less revealing for the difficulties that he encountered in bringing it to fruition.

The last chapter in this volume exemplifies the way in which material from the Boyle archive may be used, in conjunction with the text of a book by him that has been familiar in its published form ever since his time, to throw new light on when and how the work in question took shape. This is Boyle's *Free Enquiry into the Vulgarly Receiv'd Notion of Nature* (1686), and the study of it which constitutes chapter 5 was written in conjunction with Edward B. Davis and published in *Early Science and Medicine* in 1996. Not only does this give an unprecedentedly detailed account of the composition of this seminal – and much discussed – work by Boyle; it also ranges more widely to draw broader conclusions about Boyle's techniques as an author. Thus section 2 describes Boyle's characteristic method of composition from the late 1650s onwards, involving the dictation of discrete sections of text to amanuenses; it also assesses the effect this had on the structure and presentation of his writings. The rest of the chapter applies these findings to *Notion of Nature* itself, on the basis of a careful study of the extant manuscript versions of the work. It considers the published text section by section, using the manuscript evidence to indicate which parts were written when; it also surveys manuscript material relating to the work which was never published. On the basis of the more precise dating of the published and unpublished sections of the work that this makes possible, section 4 places the work in context, considering the intellectual threats that Boyle sought to confront in it, both when he initially composed it in the 1660s and when he rewrote it c. 1680. It thus anchors him more precisely than hitherto in the intellectual debates of his day.

The study of the *Free Enquiry* that constitutes chapter 5 was written at the time when the new edition of Boyle's *Works*, published in 1999–2000, was under preparation. The table of manuscript material which accompanies it acted as a template for the similar tables for each of Boyle's published books that appeared in that edition; equally exemplary was the way in which, with *Notion of Nature* as with the rest of Boyle's writings, manuscript material that overlapped with the published text was collated with that and discrepancies noted, while discarded passages and discrete sections of text were published in their own right. The study is therefore in many ways emblematic of the exploitation of the Boyle archive that has occurred since it was opened up to proper scrutiny in the 1980s, and it is thus appropriate to say a little more about this here, explaining its rationale and indicating its context in terms of the ways in which archival material has been – and should be – used in forwarding our understanding of the evolution of scientific ideas in Boyle's period as a whole.

In fact, a remarkable number of substantial and coherent deposits of manuscript material relating to scientific and related ideas in Boyle's period are extant. Thus we have extensive archival deposits for such retrospectively celebrated figures as Galileo Galilei, Marcello Malpighi, Christiaan Huygens and G.W. Leibniz. Among Boyle's English contemporaries, large personal holdings survive for such major thinkers as Isaac Newton, John Locke, John Flamsteed and Sir William Petty, as well as for such lesser figures as John Evelyn and John Aubrey. No less remarkable are the papers of such 'intelligencers' as Ismaël Bouillau in France or Samuel Hartlib in England, while the early scientific institutions, in the form of the Accademia del Cimento in Florence, the Royal Society of London and the Académie des Sciences in Paris, have also left substantial archival holdings. Indeed, such is the richness of this material that a conference devoted to comparative studies of it was held in London in 1996, the proceedings of which were subsequently published in book form as *Archives of the Scientific Revolution*.<sup>3</sup>

Of course, as this revealed, it is almost a truism that each archive is *sui generis*, not only in terms of their fortunes – in that some have survived more complete and untampered with than others – but also of their content as bequeathed to posterity by their originator. This has obvious implications for the method that is most appropriate for exploiting any archive, as we will see shortly. On the other hand, the history of such holdings displays a number of shared features, some of which may be noted here. The preservation of these collections resulted from a range of common forces: the determination of the individuals in question or their immediate successors that their literary remains should be kept intact was often perpetuated by family piety and institutional loyalty. On the other hand, as in the case of Boyle, a degree of contingency was

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3 Michael Hunter (ed.), *Archives of the Scientific Revolution: The Formation and Exchange of Ideas in Seventeenth-century Europe* (Woodbridge, 1998).

involved in terms of the intactness with which the holding has survived the intervening period. Indeed, the Boyle archive shares with various other such deposits a tension between an early impulse to preserve the archival holdings of the great man and a process of more or less deliberate attrition. As in other cases, for instance that of Galileo, a kind of symbiotic relationship can be observed between the fortunes of the archive and early attempts to memorialise its originator through a collected edition, whether or not this actually materialised. In addition, there are parallels to the centripetal role of institutions like the Royal Society not only in preserving its own records, but also in acting as a kind of magnet for discrete collections like the Boyle Papers.<sup>4</sup>

As for the way in which such holdings have been exploited in more recent times, various patterns may be noted. The commonest type of use has been piecemeal, with scholars deploying specific materials from an archive for clearly delineated purposes. Such exploitation is obviously heavily dependent on the existence of catalogues of the deposits in question, and the impulse to calendar the content of archival holdings goes back to Boyle's own time.<sup>5</sup> It has continued ever since: a new climax was reached with the great national antiquarian projects of the nineteenth century, while similar cataloguing activity continued through the twentieth, in Britain from 1945 onwards under the aegis of the National Register of Archives, reaching a new pitch in the twenty-first century with the vast online enterprise represented by Access to Archives.<sup>6</sup> In this regard, the lateness of the Boyle archive to be catalogued is anomalous, even if the catalogues of other holdings which existed earlier sometimes left something to be desired.

Armed with such catalogues, it has been feasible for scholars to select key documents from archives and to make them the subject of critical editions, in which manuscript material is presented in printed form with an apparatus comprising textual and editorial notes and commentary. Such editions tend to be selective and thematic. Among the established 'types' of edition, perhaps the most notable is that of the *Correspondence* of a figure, a well-established if arguably slightly artificial genre, in that it imposes selectiveness in the use of any specific archive – only material deemed of an epistolary nature being regarded as appropriate for inclusion – while at the same time comparable

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4 On these themes, see the 'Introduction', in Hunter (ed.), *Archives*, esp. pp. 4ff., and Michael Hunter, 'Whither Editing?', *Studies in History and Philosophy of Science*, 34 (2003), 805–20, on pp. 808–9.

5 As seen in Edward Bernard's *Catalogi Librorum Manuscriptorum Angliae et Hiberniae in unum collecti* (Oxford, 1697), cited in Hunter, 'Introduction', pp. 5–6.

6 See <<http://www.a2a.org.uk>>. For earlier developments see, e.g., Royal Commission on Historical Manuscripts, *Manuscripts and Men* (London, 1969), and *The Manuscript Papers of British Scientists 1600–1940* (London, 1982); and Dick Sargent (ed.), *The National Register of Archives: An International Perspective* (*Historical Research*, supplement 13, London, 1995). On European developments, see also Hunter (ed.), *Archives of the Scientific Revolution*, passim.



material from other repositories is brought to bear to provide the matching half of the exchanges that are documented in it.<sup>7</sup> In Boyle's case, the recent edition of his *Correspondence* is typical of the genre as a whole, with part of its content coming from a very wide range of repositories (outlined in the postscript to chapter 1, below), whereas it is selective in its use of material from the Boyle archive itself. Indeed, though its content disproportionately comes from a particular section of that archive, the Boyle Letters – of which it makes a virtually clean sweep – this is only because that grouping had been artificially created in the eighteenth and nineteenth centuries.

Other editions have been of particular types of material relating to the individual in question, selected by topic: a case in point would be the *Mathematical Papers* and *Optical Papers* of Isaac Newton, the former brought to fruition by D.T. Whiteside, the latter in progress in the hands of Alan Shapiro.<sup>8</sup> This is further exemplified by editions which have deployed material relating to John Locke from among the holdings of the Lovelace Collection of Locke manuscripts in the Bodleian Library, Oxford. Thus Peter Nidditch began an edition, which is being continued after his death by John Rogers and Paul Schuurman, of Locke's drafts for his *Essay concerning Human Understanding*, while the editors of other writings by Locke for the Clarendon edition of his works have also included manuscript material relating to the book in question, for instance J.C. Higgins-Biddle in his edition of *The Reasonableness of Christianity*.<sup>9</sup> In other cases, a single manuscript has been edited. In the case of Newton, an example would be the edition of his Trinity notebook by J.E. McGuire and Martin Tamny as *Certain Philosophical Questions*, published in 1983.<sup>10</sup> A recent specimen of the latter genre which may be singled out because of the use it makes of online technology is the edition of Galileo's notes on motion, to be found in MS Gal 72 in the Biblioteca Nazionale Centrale in Florence, which is being undertaken by the Biblioteca and the Istituto e Museo di Storia della Scienza in Florence and the Max Planck Institute for the History of Science in Berlin.<sup>11</sup>

7 For further comments, see Hunter, 'Whither Editing?', pp. 806–7.

8 D.T. Whiteside (ed.), *The Mathematical Papers of Isaac Newton* (8 vols., Cambridge, 1967–81); A.E. Shapiro (ed.), *The Optical Papers of Isaac Newton*, in progress (Cambridge, 1984–).

9 P.H. Nidditch, G.A.J. Rogers and Paul Schuurman (eds.), John Locke, *Drafts for the Essay concerning Human Understanding and Other Philosophical Writings*, in progress (Oxford, 1990–) (this will also include draft C from the Pierpont Morgan Library, New York); J.C. Higgins-Biddle (ed.), John Locke, *The Reasonableness of Christianity as Delivered in the Scriptures* (Oxford, 1999), esp. pp. 181ff. For the Lovelace collection, see P. Long, *A Summary Catalogue of the Lovelace Collection of the Papers of John Locke in the Bodleian Library* (Oxford, 1959), and 'The Mellon Donation of Additional Manuscripts of John Locke from the Lovelace Collection', *Bodleian Library Record*, 7 (1962–7), 185–93.

10 J.E. McGuire and Martin Tamny (eds.), *Certain Philosophical Questions: Newton's Trinity Notebook* (Cambridge, 1983).

11 See <<http://www.imss.fi.it/ms72>>.

In the case of the Boyle archive, an analogy in terms of thematic publication of material from the deposit is represented by John T. Harwood's edition of Boyle's early ethical treatise, *The Aretology*, and related writings in his *The Early Essays and Ethics of Robert Boyle* of 1991.<sup>12</sup> In general, however, the campaign of work that has ensued since the archive was catalogued in the 1980s has been more systematic in nature, being aimed at the scrutiny and exploitation of the content of the collection as a whole. Here, there are rather different analogues, which are worth exploring not least because of the differences between what has seemed appropriate in the Boyle case from what has seemed appropriate in certain others.

Perhaps the best-known enterprise aimed to exploit an entire archive was the Hartlib Papers Project: between 1987 and 1995, this produced a transcription of the whole of the Hartlib Papers on deposit at Sheffield University Library, which was issued in searchable, electronic form.<sup>13</sup> In this case, what was presented was not an edition but a digitised version of each document, accompanied by a facsimile. The editorial input was limited to giving each item a brief title or description and identifying the hand in which it was written. No systematic attempt was made even to identify and compare overlapping versions of the same text, which in a more traditional editorial setting might have been collated rather than simply transcribed piecemeal. On the other hand, the virtue of the outcome was its completeness and its searchability, the aim being to allow researchers to access the raw data and draw their own conclusions from it. The impact of the Hartlib Project was unfortunately reduced by the extremely high price at which the product was marketed when it was initially made available in 1995. Increasingly, however, as the text has become more widely available, it seems to be having its desired effect of making the whole archive available in searchable form to those interested in a wide range of topics. Moreover it seems likely that projects with similarly comprehensive aims which use the web rather than CD-ROM to disseminate their materials will be even more effective in making available an entire archive. A case in point is the ongoing Newton Project, which hopes to combine transcription with full editorial treatment, though as yet the project is at too early a stage for its eventual success to be evaluated.<sup>14</sup>

As far as the Boyle archive is concerned, though it might have seemed appropriate for it to be subjected to a similarly comprehensive policy of transcription, instead a consciously different strategy has been adopted in

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12 See J.T. Harwood (ed.), *The Early Essays and Ethics of Robert Boyle* (Carbondale and Edwardsville, Ill., 1991).

13 *The Hartlib Papers*, published on CD-ROM by HROnline, Humanities Research Institute, University of Sheffield (2nd edn, Sheffield, 2002). For a brief account of the history of the project, see Hunter, 'Whither Editing', pp. 812ff.

14 See <<http://www.newtonproject.ic.ac.uk>>.

relation to it. For this there are various reasons, all of them reflecting the character of the deposit. One of these is the patent incompleteness of the collection, as a result of the losses documented in chapter 2, and the randomness and miscellaneity of what survives. The second is that, since 1992, a complete microfilm of the archive has been available along with the original version of the catalogue offered in revised form here, meaning that – at least in that form – the whole deposit is in the public domain and hence editorial decisions can be evaluated by any interested in doing so.<sup>15</sup> More important, however, is the nature of the collection's content, and particularly the fact that a high proportion of it comprises manuscript material overlapping with Boyle's published writings, while other parts comprise manuscript copies of material by other authors.

Taking the manuscript material that overlaps with Boyle's published writings first, this ranges from complete Latin translations of works to drafts of sections of them in notebooks, while we also have various more or less complete manuscript versions of texts that were later published (these, too, it may be noted, often survive in a fairly random way, with only single leaves or short sections surviving of what were clearly once much longer documents). In such cases, the most important thing seemed to be to identify the work to which such material related and to collate the two, noting significant variants where these occurred. It is true that to have copied the material out would have made the process of collation easier, since electronic searching could have been used in place of the manual searching by which material overlapping with Boyle's publications was located: but it would not have been a substitute for the essential process of collation itself. As it was, once the collation had been carried out, a complete inventory of the material identified as relating to each of Boyle's writings could be included in the tables incorporated in the edition of his *Works*. Only where the manuscript version had material that was discarded from the published text did it seem appropriate to transcribe it in full. Hence a very substantial part of the archive – tabulated in detail in the catalogue published here – was dealt with in this way, with the reader being directed to the edition of Boyle's *Works* for its elucidation.

As for the material that comprises manuscript copies made at Boyle's behest – or simply owned by him – of treatises by authors in whom he was interested on topics like alchemy or medicine, again there seemed little point in transcribing these in full, as against documenting their source and noting any obvious discrepancies in the Boyle Papers version. Obviously, insofar as Boyle owned a treatise that is otherwise unknown, matters are different. A case in point is the remarkable report on the affairs of the Hudson's Bay Company written by Governor John Nixon in 1682, which was published from a manuscript copy surviving in volume 40 of the Boyle Papers by E.E. Rich in

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15 For further details, see chapter 1.



1945.<sup>16</sup> But by way of contrast, one might note Boyle Papers 20, which includes a whole series of papers read at meetings of the Royal Society, virtually all of which survive (and have been published) elsewhere. For these and all other such items in the collection, complete transcription seemed superfluous.

The advantage of this selective approach was that it focused attention on the sections of the archive which were most significant, in the form of hitherto unpublished treatises by Boyle, and his notes and memoranda, and it is these which have received the bulk of attention in terms of publishing activity over the past decade. One such group of documents were the workdiaries which are dealt with in chapter 3. Another type of material singled out for particular attention comprised complete, unpublished treatises by Boyle, or substantial sections of them, of which a virtual clean sweep has been made in volumes 13 and 14 of the *Works*. As is explained in the introductory notes to that section of the edition, in order to avoid an appearance of undue bittiness, the criterion was applied that sections of text of under about 3000 words in length were eschewed unless they dovetailed with other material to form a larger whole.<sup>17</sup>

For briefer documents and fragments, a more piecemeal policy has been adopted, and it is worth explaining this here, not least since it will alert readers to the potential for further significant discoveries that still exists. Above all, the treatment of such material has been informed by the study of the handwritings in the archive that appears in chapter 1, in that particular attention has been given to documents from pivotal stages in Boyle's career, especially his adolescent years and his prolific years of composition in the 1650s. Virtually all material deriving from these periods has now been published.<sup>18</sup> For later material, on the other hand, the choice of briefer items for publication has reflected the concerns of the scholars who have so far worked on the Boyle archive, as with Jack MacIntosh's interest in Boyle's views on atheism or Lawrence Principe's in his alchemical concerns.<sup>19</sup> Beyond that, as the updated catalogue printed here reveals, attention has been piecemeal, and there is clearly still great potential for residual material of this kind in the archive to be exploited.<sup>20</sup>

Hence, an overall rationale has been adopted in the way in which the Boyle archive has been studied which may be claimed to have been dictated by the nature of the archive itself. Though the strategy involved differs from that used in relation to certain other deposits that have come down to us from Boyle's

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16 E.E. Rich (ed.), *Minutes of the Hudson's Bay Company 1679–84* (2 vols., Toronto, 1945–6), vol. 1, pp. 237–304. See also *ibid.*, vol. 2, pp. xliii–xlvi.

17 *Works*, vol. 13, p. xiii.

18 *Ibid.*, pp. xiv–xv and notes.

19 J.J. MacIntosh, *Boyle on Atheism* (Toronto, 2005); L.M. Principe, *The Aspiring Adept: Robert Boyle and his Alchemical Quest* (Princeton, 1998), esp. pp. 235ff.

20 For a list, see *Works*, vol. 14, pp. 359–65.



period, there are parallels, for instance in relation to the archive that Christiaan Huygens bequeathed to the University of Leiden when he died in 1695, which has been there ever since. Over a long period from the late nineteenth century to the mid twentieth, this was exploited intensively and fruitfully in connection with the edition of Huygens' *Oeuvres Complètes* produced in those years, in which material from the archive is repeatedly juxtaposed with Huygens' published writings.<sup>21</sup> Though reservations have been expressed about some aspects of the editors' policies – hardly surprisingly, considering how long ago much of the work was done – the basic strategy has been seen to be as appropriate in that case as the strategy outlined here in relation to Boyle.<sup>22</sup> Moreover there are also other analogues: for example, the treatment of the Lovelace Locke collection, which has already been referred to, or the use that has been made of the massive archive of G.W. Leibniz at Hanover in connection with the editing of his writings.<sup>23</sup>

As this suggests, it is right that the treatment of each archive should be decided on a piecemeal basis, and a variant on the Boyle model may well prove appropriate for archives that have yet to be systematically exploited. Hence there are arguably important lessons to be learned from the case of Boyle concerning the use of archival resources in the study of ideas in his period more generally, and this is therefore an appropriate point to turn to a more intensive study of the Boyle manuscripts in their own right.

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21 Christiaan Huygens, *Oeuvres Complètes* (22 vols., The Hague, 1888–1952).

22 See J.G. Yoder, *Unrolling Time: Christiaan Huygens and the Mathematicisation of Nature* (Cambridge, 1988), pp. x–xi and passim; id., 'Christiaan Huygens' Great Treasure', *Tractrix*, 3 (1991), 1–13; id., 'The Archives of Christiaan Huygens and his Editors', in Hunter (ed.), *Archives of the Scientific Revolution*, pp. 91–107.

23 See above, p. 7. For developments concerning Locke, see the ongoing *Locke Newsletter*. For the Leibniz archive, see J.G. O'Hara, "'A Chaos of Jottings that I do not have the Leisure to Arrange and Mark with Headings': Leibniz' Manuscript Papers and their Repository', in Hunter (ed.), *Archives of the Scientific Revolution*, pp. 159–70.



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## Chapter 1

# Robert Boyle and his Archive

### Boyle and his Writings

The Boyle archive comprises the Boyle Papers – forty-six uniformly bound volumes of miscellaneous papers; the Boyle Letters – seven volumes of correspondence bound in guardbooks; and thirty-one volumes of notebooks and other manuscripts. Housed at the Royal Society in London since 1769, this represents the principal archival resource for the study of Robert Boyle, one of the seminal figures of the Scientific Revolution. In the formative years that witnessed the founding of the Royal Society and an unprecedented flowering of scientific activity in England, Boyle did more than anyone to define the character of English science – both as a prolific author, who published over forty works in the course of his lifetime, and as a widely respected and influential personality in his own right. Boyle was the prime advocate of the blend of systematic inductivism and a commitment to a mechanical view of the workings of the world which is rightly seen as characterising the early Royal Society. He was also a major apologist for the new science, both its usefulness and its religious role. Arguably, Boyle was the dominant figure in English science in the generation before Newton; it is not surprising that he and his work have both been held in high regard ever since.

Boyle was born on 25 January 1627 at Lismore, Munster, son of the notorious Richard Boyle, First Earl of Cork. His father had made a fortune as an adventurer in Ireland, rising to the position of Lord Treasurer of Ireland and an English Privy Councillor.<sup>1</sup> As a result, he bequeathed his children high status and considerable wealth, both of which were to form leading features of the life of his youngest son, Robert. Robert's education began at home and continued first at Eton and then in foreign travel. During the formative years that he spent abroad, from 1639 onwards, Boyle visited France, Geneva – where he claimed to have experienced a religious awakening which affected him for the rest of his life – and Italy, where he encountered the writings of Galileo. During Boyle's travels, Civil War broke out in England, temporarily affecting the family fortunes; but, after returning to England in 1644, in 1645 Boyle was able to take up residence at the family manor house at Stalbridge,

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<sup>1</sup> See Nicholas Canny, *The Upstart Earl: A Study of the Social and Mental World of Richard Boyle, First Earl of Cork, 1566–1643* (Cambridge, 1982).

Dorset, where he spent much of the next decade, apart from a visit to Ireland in 1652–4. Late in 1655 or early in 1656 he moved to Oxford, joining the circle of natural philosophers there which formed the liveliest centre of English science at that time. After the Restoration of the Stuarts in 1660, many of these men moved away from Oxford, in many cases to London, where the Royal Society was founded in that year. But Boyle moved to London only in 1668, thereafter sharing a house in Pall Mall with his sister Katherine, Lady Ranelagh, until both of them died within a few weeks of one another in 1691.

Boyle's career as an author began in the 1640s, when he compiled a number of longer or shorter writings on religious and moral issues, which have now been published in full.<sup>2</sup> At this point in his career, Boyle was very much a moralist rather than a 'scientist', and his preoccupations have often been misunderstood by those who have read them through the filter of his later career, not least in relation to the shadowy 'Invisible College' with which he was associated at this time. In the years around 1650, however, Boyle seems to have suffered a real conversion experience, suddenly discovering the fascination with the empirical investigation of nature and its use in connection with religious apologetic that were to dominate the rest of his career.<sup>3</sup> In pursuit of these ends, he became increasingly involved with others sharing similar concerns, notably the American-born chymist George Starkey and the circle of intellectuals surrounding the Prussian emigré Samuel Hartlib. Similar links with like-minded intellectuals continued both at Oxford in the 1650s and 1660s and in London in the 1670s and 1680s; in both places he was also active in the direction of missionary and charitable work, including the publication of the Bible in such languages as Algonquian and Irish. But Boyle's predominant activity was writing and experimenting: throughout his adult career, books continued to come out at a rate of almost one a year, while the profuse experiments in which he engaged are evidenced not least by records surviving among the Boyle Papers. More than almost any of his scientific contemporaries – and assisted by his private means – Boyle followed a career resembling that of a modern research scientist, devoting his life to extensive and systematic experimentation.

Boyle's first publication was a contribution to a collaborative volume put out by Hartlib in 1655, advocating the free circulation of scientific and medical data.<sup>4</sup> Though in the 1650s he clearly wrote assiduously on a range of topics on which books by him were to appear at a later date, by the time of the Stuart Restoration Boyle had produced only one book. This was a devotional work

2 Mainly in John T. Harwood (ed.), *The Early Essays and Ethics of Robert Boyle* (Carbondale and Edwardsville, Ill., 1991), and in *Works*, vol. 13.

3 See esp. Michael Hunter, 'How Boyle Became a Scientist', *History of Science*, 33 (1995), 59–103; reprinted in id., *Robert Boyle (1627–91): Scrupulosity and Science* (Woodbridge, 2000), ch. 2.

4 Published in *Works*, vol. 1, pp. 1–12. See also M.E. Rowbottom, 'The Earliest Published Writing of Robert Boyle', *Annals of Science*, 6 (1950), 376–89.



usually known as *Seraphic Love*, published in 1659, which was to prove his most successful publication, going into eleven editions during his lifetime and four thereafter. From 1660 onwards, however, Boyle embarked on a profuse publishing career which was to continue for the rest of his life, though he never lost a certain diffidence in presenting his writings to the public. Among the works that he now put into print were two further religious treatises, *Some Considerations touching the Style of the Holy Scriptures* of 1661 and *Occasional Reflections* of 1665. But more important were the major scientific works that he produced at this time. First, there was his classic work on pneumatics, *New Experiments Physico-Mechanical, Touching the Spring of the Air and its Effects* (1660). Both in this work and in his subsequent defence of it against Thomas Hobbes and other critics, Boyle used a key piece of scientific equipment, the air-pump, to explore the physical properties of the air, vindicating the possibility of a vacuum, illustrating the extent to which life depended on air, and proving that the volume of air varies inversely with its pressure (Boyle's Law). He was to publish other works on related topics throughout the remainder of his career, including his *Hydrostatical Paradoxes* of 1666 and his *General History of the Air*, posthumously published in 1692.

The year 1661 saw two other important publications, his famous *Sceptical Chymist* and his equally seminal *Certain Physiological Essays*; again, these represented the beginning of a series of publications on related topics continuing over several decades, in which he sought to vindicate a mechanistic theory of matter and to remodel chemistry along new lines, distinct from those adopted hitherto by 'Vulgar Spagirists' and others. In these treatises, he also crucially vindicated an experimental approach, particularly in *Certain Physiological Essays*, which contained an important essay asserting the need to record unsuccessful experiments. In 1663 came the first part of *Some Considerations touching the Usefulness of Experimental Natural Philosophy*, the second instalment following in 1671, in which Boyle sought to vindicate an improved understanding of nature both in its own right and for its utilitarian advantages. The mid 1660s saw the appearance of various lengthy books setting out Boyle's experimental findings and using them to undermine the presuppositions of Aristotelian science. This motive was particularly overt in his *Origin of Forms and Qualities* of 1666, but it also underlay his experimental histories of colours (1664) and cold (1665): again, everything was reduced to matter and motion, in contrast to the complicated theories of the Aristotelians, and this was a further project which was to continue over subsequent years, perhaps most notably in his *Experiments, Notes, &c., about the Mechanical Origin or Production of Divers Particular Qualities* of 1675–6.

In the 1670s, Boyle continued to publish works on a range of topics, including treatises developing the themes of his experimental work in the 1660s and others of a more speculative nature. He also pursued his earlier tradition of theological publication, his works of the 1660s being followed by

*The Excellency of Theology, Compar'd with Natural Philosophy* of 1674 and *Some Considerations about the Reconcilableness of Reason and Religion* of 1675. In the 1680s, his publishing interests shifted particularly to medical matters, hitherto represented largely by the relevant section of his *Usefulness of Natural Philosophy*: he brought out various books on such topics, ranging from *Memoirs for the Natural History of Human Blood* (1684) to *Medicina Hydrostatica* (1690) and the collections of recipes that he presented to the public in his *Medicinal Experiments* (1688–94). He also produced more miscellaneous works in these later years, including a Baconian natural history, *Experimenta et Observationes Physicae* (1691). At the same time, his activity as a religious apologist continued, with perhaps the most famous of all his works of this kind, *The Christian Virtuoso*, appearing in 1690–1. His concern about the theological implications of the new philosophy is also in evidence in his *Discourse of Things above Reason* (1681) and his *Disquisition about the Final Causes of Natural Things* (1688), while his important *Free Enquiry into the Vulgarly Receiv'd Notion of Nature*, which testifies to comparable preoccupations, appeared in 1686. It was appropriate that at his death in 1691 Boyle endowed a Lecturership to expound the Christian message against its infidel opponents, for a number of the Boyle Lecturers were to promote the 'physico-theology' which he had pioneered in his own writings.

Boyle's crucial significance for a range of facets of natural philosophy was recognised in his lifetime. It is symptomatic that – as recent studies have underlined – his influence was particularly important for Isaac Newton, the leading figure in the generation following Boyle's, whose work is often seen as the culmination of the scientific achievement of seventeenth-century England.<sup>5</sup> By the eighteenth century, Boyle's importance was taken for granted, and he was repeatedly referred to as a paragon of Baconian, experimental science. As the writer Peter Shaw put it in an epitomised version of Boyle's works that he produced: 'Mr Boyle appears to have been, in all respects, one of the most profitable authors, who ever treated philosophy ... 'Tis certain, that he laid the foundations of almost all the improvements which have been made since his time, in natural philosophy.'<sup>6</sup> It is not surprising that in the years following Boyle's death epitomes of his writings were produced by Richard Boulton as well as by Shaw, while demand for his works was such that a collected edition of them, produced by Thomas Birch in 1744, was reprinted in 1772.

Boyle's significance has been reflected by scholarly interest in the twentieth century. He received an appropriate degree of treatment in such pioneering works as E.A. Burtt's *Metaphysical Foundations of Modern Physical Science* (1924), chapter 6 of which is devoted to Boyle. Attention to him intensified, however,

5 See, e.g., B.J.T. Dobbs, *The Foundations of Newton's Alchemy* (Cambridge, 1975), ch. 6, or A.E. Shapiro, *Fits, Passions and Paroxysms* (Cambridge, 1993), esp. ch. 3.

6 Peter Shaw (ed.), *The Philosophical Works of the Honourable Robert Boyle*, 3 vols. (London, 1725), vol. 1, pp. xiii, 185.

with the burgeoning interest in history of science characteristic of the postwar years, which also stimulated a reprint of Birch's edition of his writings in 1965 with a lucid introduction by Douglas McKie. The importance of Boyle's early pneumatic work was recognised by the inclusion of key passages from his *New Experiments ... Touching the Spring of the Air* as the first of the Harvard Case Histories in Experimental Science, edited by J.B. Conant in 1948. As for his vindication of what he christened 'corpuscularianism', Boyle forms the centrepiece of Marie Boas's book-length study, 'The Establishment of the Mechanical Philosophy', published in *Osiris* in 1952, in which Boyle's matter theory was fully expounded against the background of earlier atomist ideas. Subsequently, Boas went on to write a book on *Robert Boyle and Seventeenth Century Chemistry*, published in 1958, in which an attempt was made to define Boyle's position in the transitional phase in the development of chemistry preceding the great age of Lavoisier. Boas, who later adopted the married name of Marie Boas Hall, has also been responsible for various ancillary studies, including a collection of Boyle's writings under the title *Robert Boyle on Natural Philosophy* which came out in 1965. Another influential early study of Boyle's science was Thomas S. Kuhn's 'Robert Boyle and Structural Chemistry in the Seventeenth Century' (*Isis*, 1952), in which the legacy of Boyle's corpuscularianism was seen as a mixed one.<sup>7</sup>

Boyle also attracted scholarly attention in the postwar years for his concern about the mutual relations of science and religion. M.S. Fisher's *Robert Boyle, Devout Naturalist* appeared as early as 1945, and further studies of Boyle's role from this point of view were made by Harold Fisch in 'The Scientist as Priest: A Note on Robert Boyle's Natural Theology' (*Isis*, 1953); by R.M. Hunt in *The Place of Religion in the Science of Robert Boyle* (1955); and by R.S. Westfall in his classic *Science and Religion in Seventeenth Century England* (1958).<sup>8</sup> A later study devoted almost exclusively to Boyle was E.M. Klaaren's *Religious Origins of Modern Science: Belief in Creation in Seventeenth-century Thought* (1977), which examined Boyle's ideas in the context of the 'voluntarist' and 'spiritualist' traditions in seventeenth-century theology. A rather different view of Boyle's religious preoccupations appeared in Rosalie Colie's important study of Boyle's interest in miracles in her 'Spinoza in England 1665–1730', published in *Proceedings of the American Philosophical Society* in 1963, followed by R.M. Burns in his *The Great Debate on Miracles, from Joseph Glanvill to David Hume* (1981). From

7 Another study worthy of mention is Maurice Mandelbaum, *Philosophy, Science and Sense Perception* (Baltimore, 1964), ch. 2. To save space, full bibliographical citations for secondary works on Boyle have not always been given here. For these, see the bibliography on the Boyle website, <<http://www.bbk.ac.uk/boyle>>.

8 An even earlier work whose initial impact was limited by wartime circumstances was Reijer Hooykaas, *Robert Boyle: Een Studie over Natuurwetenschap en Christendom* (Loosduinen, 1943). However, this has recently been given a new lease of life in an English translation, *Robert Boyle: A Study in Science and Christian Belief*, with a foreword by J.H. Brooke and Michael Hunter (Lanham, Md, 1997).



the point of view of the relationship between Boyle's scientific views and his religious outlook, a further influential article which should be singled out is J.E. McGuire's 'Boyle's Conception of Nature', published in the *Journal of the History of Ideas* in 1972, while an anthology of writings by Boyle which retains value is M.A. Stewart's *Selected Philosophical Papers of Robert Boyle* (1979).

In terms of materials for the study of Boyle, a significant step forward – in view of the complicated publishing history of many of Boyle's works – was the publication of J.F. Fulton's *Bibliography of Boyle* in the *Proceedings* of the Oxford Bibliographical Society in 1932. This gave a full listing of all of Boyle's works, including the various editions, continental as well as English; a revised edition was published by Oxford University Press in 1961, and this remains the definitive work on the bibliography of Boyle, also including an extensive listing of secondary sources on Boyle. Also important was the work of R.E.W. Maddison, who published a whole series of biographical studies of Boyle in *Notes and Records of the Royal Society* and *Annals of Science* in the 1950s and 1960s, collecting his principal findings in book form in 1969. These studies largely superseded the more superficial biographies of Flora Masson (1914) and L.T. More (1944), though Thomas Birch's *Life* of 1744 still retains a certain value, while Maddison has had far from the final say on the biographical aspects of Boyle.

In the 1970s and 1980s the leading trend in Boyle studies sought to place him more closely within his social and political context. One such attempt was made by Charles Webster in *The Great Instauration* (1975), which dealt with Boyle in the context of the Hartlib circle, with its emphasis on the amelioration of human life. This work also dealt with Boyle's Oxford milieu in the 1650s, though a fuller study from this point of view was that of Robert G. Frank in his *Harvey and the Oxford Physiologists: Scientific Ideas and Social Interaction* (1980), which offered a searching, fully contextualised account of the school of 'Oxford physiologists' with whom Boyle was associated at that point. Others sought to place Boyle in a more overtly social and 'ideological' context than hitherto, stressing the ulterior motives underlying the intellectual positions that he adopted. This approach was taken particularly by J.R. Jacob in an article on 'The Ideological Origins of Robert Boyle's Natural Philosophy', published in the *Journal of European Studies* in 1972 and subsequently expanded into his book *Robert Boyle and the English Revolution* (1977); a related article, 'Boyle's Atomism and the Restoration Assault on Pagan Naturalism', appeared in *Social Studies of Science* in 1978. The wider context to Jacob's views on Boyle was spelled out in an article that he published in *Isis* in 1980 in conjunction with Margaret C. Jacob, 'The Anglican Origins of Modern Science: The Metaphysical Foundations of the Whig Constitution', which also drew on Margaret Jacob's work on the Lectureship that Boyle founded. On the other hand, though widely acclaimed when originally published, the work of these scholars has met with increasing reservations as further research on related topics has illustrated the flimsy basis of many of their conclusions.

More significant has been Steven Shapin and Simon Schaffer's *Leviathan and the Air-pump: Hobbes, Boyle and the Experimental Life* (1985), which gave illuminating treatment to the controversy between Hobbes and Boyle, drawing out the issues that were at stake between them. Thus while Hobbes disputed the validity and significance of Boyle's experimental findings, Boyle insisted that, through them, he could establish collectively witnessed 'matters of fact' which might form the basis of a real intellectual consensus. On the other hand, though it has proved highly influential, this book has also been controversial, both for its overall approach and for its tendency to exaggerate the significance of some facets of Boyle's context and to neglect others. Subsequently, Steven Shapin produced *A Social History of Truth: Civility and Science in Seventeenth-Century England* (1994), which presented Boyle as the paragon of a certain ideal of intellectual life: the desiderata of a natural philosopher, and the appropriate codes of practice in the scientific community of the day, were thus seen as predicated on genteel ideals that Boyle above all exemplified, with claims to 'truth' being filtered through socially defined criteria of credibility and trustworthiness. As with *Leviathan and the Air-pump*, this has already provoked controversy, and will no doubt continue to do so.<sup>9</sup>

The years since 1990 have seen something of a renaissance of Boyle studies, signalled by a conference held at Stalbridge in December 1991 to mark the tercentenary of Boyle's death, the proceedings of which were published in 1994 in a volume, *Robert Boyle Reconsidered*, which also acted as a kind of benchmark by offering a retrospective survey and a comprehensive bibliography of fifty years of Boyle scholarship.<sup>10</sup> Many of the contributors to that book subsequently went on to produce longer – often monographic – treatments of the findings presented there, and these may be summarised here.

Rose-Mary Sargent followed up the study of 'Boyle's construction of an experimental philosophy' in *Robert Boyle Reconsidered* to produce her book *The Diffident Naturalist: Robert Boyle and the Philosophy of Experiment* in 1995. In it, she traces the various sources of Boyle's experimental method, creating a profile of his practice and emphasising his complexity as a thinker and the subtlety of his position on many issues, in the course of doing so avowedly confronting the social constructivism of the Shapin and Schaffer approach. Other recent work has emphasised the complexity of Boyle's outlook on natural philosophical issues. In particular, the work of Antonio Clericuzio and John Henry – in the former case, especially a seminal paper published in *Annals of Science* in 1990, in

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9 For a brief overview of the debates over the views both of the Jacobs and of Shapin and Schaffer, see Michael Hunter, 'Scientific Change: Its Setting and Stimuli', in Barry Coward (ed.), *A Companion to Stuart Britain* (Oxford, 2003), pp. 214–29.

10 Michael Hunter (ed.), *Robert Boyle Reconsidered* (Cambridge, 1994; paperback edn, 2003). The bibliography has since been updated first by the serial *On the Boyle*, of which 5 issues appeared between 1997 and 2002, and more recently by the Boyle website, <<http://www.bbk.ac.uk/boyle>>.

the latter particularly an essay on Boyle's views on cosmical qualities in the 1994 volume – has indicated that Boyle's corpuscularianism was more complicated and less purely mechanical than was once thought, illustrating that Boyle was more susceptible to explanations of natural phenomena which invoked 'seminal principles' and other powers than the exclusive emphasis of earlier historians on matter and motion had suggested. A similar point was made in a significant article by Alan Chalmers on 'The Lack of Excellency of Boyle's Mechanical Philosophy' published in *Studies in History and Philosophy of Science* in 1993.

Clericuzio has also illustrated Boyle's continuing involvement with the tradition of ideas associated with the Flemish chemist, J.B. van Helmont, building on various articles to place Boyle in a broader context spanning the seventeenth century as a whole in his *Elements, Principles and Corpuscles* (2000). Meanwhile, the scholar who has emerged as the leading authority on Boyle's alchemy is Lawrence M. Principe. Building on various crucial studies, including an article on Boyle's use of codes in his chymical writings which is crucial for understanding the Boyle archive,<sup>11</sup> Principe published his seminal work, *The Aspiring Adept: Robert Boyle and his Alchemical Quest*, in 1998. This definitive appraisal of Boyle's alchemical interests illustrates just how central these were to his preoccupations for much of his career. It also explains how this is to be reconciled with the traditional view of Boyle as 'The Sceptical Chymist', in the words of the title of his most famous book: in fact, as Principe points out, Boyle's quarrel was with superficial textbook writers, not with the deep adepts of the alchemical tradition. In addition, with William R. Newman, Principe has produced a major study of the partnership between Boyle and George Starkey, *Alchemy Tried in the Fire* (2002); this gives a detailed and fascinating account of the way in which Starkey produced an experimental version of Helmontianism that was deeply influential on Boyle. Newman himself has produced a whole series of studies linked to his essay in *Robert Boyle Reconsidered*, including his biography of Starkey, *Gehennical Fire* (1994), his re-examination of Boyle's intellectual debt to the early seventeenth-century natural philosopher, Daniel Sennert, and most recently his study of the alchemical roots of the ambition to transform nature that is so central to Boyle's thought.<sup>12</sup> In all, our understanding of this whole aspect of Boyle's natural philosophy has been completely transformed in recent years.

We have also acquired a deeper knowledge of Boyle's philosophical and theological outlook. One scholar who has made a major contribution on this front is Jan Wojcik, who developed her paper in *Robert Boyle Reconsidered* into a

11 L.M. Principe, 'Robert Boyle's Alchemical Secrecy: Codes, Ciphers and Concealments', *Ambix*, 39 (1992), 63–74.

12 See especially Newman, 'The Alchemical Sources of Robert Boyle's Corpuscular Philosophy', *Annals of Science*, 53 (1996), 567–85; *Promethean Ambitions: Alchemy and the Quest to Perfect Nature* (Chicago, 2004).



monograph on *Robert Boyle and the Limits of Reason* (1997). She there demonstrates Boyle's conviction that, both in theology and in natural knowledge, there were things that seemed contradictory or incomprehensible to inferior human intellects although not to God; this gave Boyle a nescience in his natural philosophy which formed a crucial accompaniment to his empiricism. Meanwhile, Peter Anstey has emerged as a leading expert on Boyle's philosophical outlook with an important monograph, *The Philosophy of Robert Boyle* (2000), which supersedes earlier studies from a similar viewpoint such as Peter Alexander's *Ideas, Qualities and Corpuscles* (1985). In it, he offers a clear and subtle account of Boyle's corpuscularianism and of his philosophical outlook as a whole, sharing with Wojcik an emphasis on the extent to which Boyle considered that God could have done things differently had he wished, and to which even the laws of nature were contingent by virtue of being expressions of the Divine Will. He has also written various important articles on related topics.<sup>13</sup> In this area, a further contribution has been made by Jack MacIntosh, who has followed up his paper in *Robert Boyle Reconsidered* with various studies, including a book-length edition of Boyle's writings vindicating theism against what he saw as the philosophical and more general inadequacy of anti-Christian thought in his *Boyle on Atheism*.

There have also been some key studies of Boyle's life and his intellectual evolution. John Harwood contributed an important account of Boyle's literary persona to *Robert Boyle Reconsidered*, and he has since transformed our appreciation of Boyle's formative years as a writer by his 1991 edition of Boyle's *Early Essays and Ethics*. Lawrence Principe has provided crucial insights into Boyle's early writings and his influence by French romances, while further studies of related topics have been made by Malcolm Oster and others.<sup>14</sup> Meanwhile, I took a step towards the new biography of Boyle that is sorely needed by editing the key biographical texts concerning him in *Robert Boyle by Himself and his Friends* (1994). I have also written a series of studies in which the complexities of Boyle's personality are explored, originally published in various journals and edited volumes between 1990 and 1998 and collected in book form as *Robert Boyle (1627–91): Scrupulosity and Science* (2000). As its title implies, the leitmotif of this book is my discovery of Boyle's tortured religious life (which, it is argued, directly effected his obsessiveness as an experimenter), but the volume also ranges more widely in exploring different aspects of Boyle's complex personality and his ambivalent relations both with public opinion and with such professional groups as doctors (in this connection, it gives a rather different view of Boyle's medical concerns from that presented by Barbara

13 For a full listing, see the bibliography on the Boyle website referred to in nn. 7 and 10.

14 See especially Principe, 'Virtuous Romance and Romantic Virtuoso: The Shaping of Robert Boyle's Literary Style', *Journal of the History of Ideas*, 56 (1995), 377–97; Oster, 'Biography, Culture and Science: The Formative Years of Robert Boyle', *History of Science*, 31 (1993), 177–226. See also above, n. 3.



Kaplan in her synthesis on such topics, *'Divulging of Useful Truths in Physick'* (1993)). As a pendant to this book, I organised a conference entitled 'Psychoanalysing Robert Boyle' at Birkbeck College in July 1997, at which analysts from different psychoanalytical schools were invited to present a view of Boyle; the results of this were published as a special issue of the *British Journal for the History of Science* in 1999.

Perhaps the most important development in Boyle studies in the past decade and a half is that, for the first time for over two hundred and fifty years, we have new editions of Boyle's *Works* and *Correspondence* to supersede the worthy but dated efforts of Thomas Birch in the early eighteenth century. Both provide the texts that they present with a full apparatus, including introductory material, annotations and translations, which were almost entirely missing from Birch's edition. In addition, both are based on the fullest possible examination of relevant source materials, including archival ones; in the course of this, large quantities of material which had never previously been published have been put into print. A parallel initiative has been the publication, first in 2001 and then in revised, illustrated form in 2004, of an edition of Boyle's workdiaries, a key component of the archive in which he recorded his experiments and observations, and information that he was divulged by others: a full account of this appears in chapter 3 of this book. Beyond that, various of the recent studies already referred to – particularly those of Principe, MacIntosh, Harwood and Hunter – have made extensive use of material from the Boyle archive, which has thus been central to the developments in Boyle studies in the past decade and a half.<sup>15</sup> It is therefore now appropriate to consider the history of the archive itself.

### **The History of the Boyle Papers and Letters**

Elements of the Boyle archive as it exists today are already recognisable in various inventories that survive of Boyle's papers in his later years. Most of these are now to be found in BP 36 and, from them, quite a vivid sense can be formed of the way in which Boyle lived surrounded by his papers.<sup>16</sup> Both in Boyle's 'great Room' and in his 'Bed-chamber' in the house that he shared with his sister, Lady Ranelagh, in London's Pall Mall, there were various boxes, square or oblong, some of them 'lockt'. Within these were bundles of papers, usually in pasteboard wrappers and tied up with string or ribbon, though some were 'Paper Books'. In the inventories, a number of these are identified by their

15 Such usage is fully tabulated in the catalogue, below. See also *Works*, vol. 14, pp. 359–65.

16 They have now been published in full in *Works*, vol. 14, pp. 327–58. See also Hunter, 'Mapping the Mind of Robert Boyle: The Evidence of the Boyle Papers', in id. (ed.), *Archives of the Scientific Revolution* (Woodbridge, 1998), pp. 121–36, reprinted in id., *Scrupulosity and Science*, ch. 6.

subject matter: for instance, ‘Many notes concerning Light & Inflammability, white Past-board cover, yellow and black Ribbons’; or ‘A large Role [sic] of Papers tyed up writt upon Papers belonging to the History of Qualitys’; or ‘A yellow quarto tyed up with Packthred writt upon *Medicinalia*’; or ‘A Paper Book Entitul’d the old Book of Confusions’. From them, various clues are available as to how Boyle organised his manuscripts in his later years, as we will see in the next section.

In the will that he drew up the summer before he died, Boyle declared his intention to bequeath the papers to Lady Ranelagh. Since she predeceased him, however, responsibility for them instead passed on his death to his executors, his brother, Richard Boyle, Earl of Burlington, Sir Henry Ashurst and his former servant, John Warr junior. The papers themselves seem to have passed into the possession of Warr, whom Boyle expected to take the main care for his affairs, though Burlington evidently felt some responsibility for them.<sup>17</sup> That they existed seems to have been reasonably well known at this stage. Thus Sir Peter Pett in his biographical notes on Boyle cited Warr ‘that the papers were very many & would aske some moneths time to peruse’, while the divine John Williams, who published Boyle’s early *Free Discourse against Customary Swearing* from a manuscript that he was given by Burlington and Ashurst in 1695, was involved in the following year in plans for a collected edition of Boyle and hoped ‘that it would be convenient that some inquiry should be made of what might be found among his papers, fit for the press’: in the event, however, nothing came either of this or of the edition as a whole.<sup>18</sup> In addition, in a separate memorandum Boyle had specified that his chemical papers should be inspected by a committee comprising John Locke, Edmund Dickinson and Daniel Coxe; this evidently resulted in material being removed from the collection, some of it being copied at Locke’s behest, but if the intention was that publication might result, then nothing materialised.<sup>19</sup>

More significant was the project for writing Boyle’s life which got off the ground at the same time, since it was anticipated that this, too, might draw on the papers: indeed, it was in this connection that Pett referred to them. Initially it was hoped that Boyle’s biographer would be his friend Gilbert Burnet, Bishop of Salisbury, who had preached Boyle’s funeral sermon in January 1692. He proved too busy, however: instead, his place was taken by the scholar

17 R.E.W. Maddison, *The Life of the Hon. Robert Boyle* (London, 1969), pp. 258, 279–80; id., ‘A Summary of Former Accounts of the Life and Work of Robert Boyle’, *Annals of Science*, 13 (1957), 90–108, on pp. 99–100. That Warr had all of the papers is stated by Pett: see next note. Though some papers were retained by Burlington, these probably related only to property: Maddison, ‘Summary’, pp. 101, 106.

18 Michael Hunter (ed.), *Robert Boyle by Himself and his Friends* (London, 1994), p. 77. For Boyle’s *Customary Swearing*, see *Works*, vol. 12. John Evelyn, *Diary and Correspondence*, ed. William Bray [and John Forster] (4 vols., London, 1850–2), vol. 3, p. 359. See also Evelyn to Williams, 15 June 1696, British Library Add. MS 78299 (no. 759).

19 See Maddison, ‘Summary’, p. 100; *Life*, pp. 203–4. See also below, ch. 2.

William Wotton, author of *Reflections upon Ancient and Modern Learning* (1694), in which he defended the moderns against the attack on them launched by Sir William Temple in his *Essay upon the Ancient and Modern Learning* (1690), and hence quite an eminent figure in his own right. Wotton seems to have undertaken the task in March 1696, encouraged at first by John Evelyn, long a friend of Boyle's, and a trustee of the Boyle Lectures, and then by Burnet and others.<sup>20</sup> From the outset Wotton had the intention of using Boyle's manuscripts in his study, although he seems at first to have experienced some difficulty in gaining access to them. Pett noted that Warr had told him that the Earl of Burlington had instructed him to show the papers to no one (it was Pett's understanding that such secrecy was enjoined by Boyle's will); in addition, Wotton records how, even after he had 'a positive promise from the executors that I should have the use of Mr Boyle's papers, my Lord Burlington at last insisted upon my giving a bond that I demanded no gratification'.<sup>21</sup> Such problems were, however, overcome, and an arrangement was reached by which Wotton was to see all of the papers and to return them to Warr after he had used them: this was evidently agreed to in a letter from Wotton to Warr which was seen by Henry Miles in the early eighteenth century but which no longer survives.<sup>22</sup>

That Wotton did indeed devote much attention to the Boyle archive is clear from the manuscripts themselves: collation of extant examples of Wotton's hand (Plate 15) with the handwriting of endorsements both to the Letters and to the Papers suggests that a substantial number of these are by him, indicating that he read, sorted and tabulated the material quite exhaustively. Indeed, these physical vestiges suggest that Wotton probably spent more time examining the archive than anyone since, though his efforts have hitherto been ignored. He presumably began this work as soon as the problem involving Burlington had been resolved: having informed Evelyn of this in a letter of 2 January 1698, in a subsequent letter dated the 20th of that month Wotton reported how he 'had just got a box of papers and was going to digest matters for the forge' at that point. Eighteen months later, however, in a further letter of 8 June 1699, he told Evelyn how 'the parcels I have yet had are very inconsiderable, in comparison of what is behind: they are sent me by trunkfuls at a time, & when one parcel is perused, what is like to be for my purpose I keep'.<sup>23</sup> There are no subsequent references to Wotton's archival work, but what is clear is that – over a period of some years – he went through most if not all of the Letters and

20 For an exhaustive account of the inception and progress of the project, see *Boyle by Himself and his Friends*, pp. xxxviff., which supersedes the account given in Maddison, 'Summary'.

21 Evelyn, *Diary and Correspondence*, vol. 3, pp. 353, 370. For Pett, see *Boyle by Himself and his Friends*, pp. xxxii–xxxiii and passim.

22 Maddison, 'Summary', p. 101n.

23 Evelyn, *Diary and Correspondence*, vol. 3, pp. 370–72; British Library Add. MS 78685, no. 110. Cf. Wotton to Evelyn, 8 August 1699, where he writes: 'as yet I have seen but a small pittance': *ibid.*, no. 112.



Papers, picking out what he wanted and retaining it for further use, and returning the residue to Warr. Wotton's progress with his intended 'Life' was sufficient to justify the appearance of an advertisement for it in the *London Gazette* in May 1699. This described it as

A History of the Life, and Extract of the Writings of the Hon. Robert Boyle Esq.; Collected as well from what are in Print, as from his Manuscripts and Papers of Experiments never Published, and also from a vast number of Letters to and from the most Learned Men in Europe, his Correspondents: Undertaken by W. Wotton B.D. and Fellow of the Royal Society, at the Desire of divers Gentlemen of the said Society, and other Friends of Mr Boyle, as also of his Executors, who have for that purpose entrusted the said Papers with Mr Wotton.<sup>24</sup>

Various delays ensued, however, and, though Wotton continued to work on the project in the first decade of the eighteenth century, in 1709 writing to Sir Hans Sloane requesting the loan of books for the purpose, in the end the biography was never published: though Henry Miles saw all or part of it in the early 1740s, only one fragment of it now survives.<sup>25</sup> The reasons for Wotton's failure to complete the project are obscure, though in an early life of him it was attributed to the fact that most of his papers 'were unhappily either lost or destroyd, & he was so much affected by this Misfortune, to have spent so much Time to no Purpose, that he had not Resolution enough to think of turning all the same Books & papers over a second Time, & beginning again'.<sup>26</sup>

The next phase in the history of the Boyle Letters and Papers was associated with a further project for editing Boyle's works and writing his life, this time under the auspices of the cleric and antiquary Thomas Birch. Birch had written a biography of Boyle for the third volume of the enlarged English translation of Pierre Bayle's *General Dictionary, Historical and Critical*, which was brought out in ten volumes between 1734 and 1741, the third volume appearing in 1735. In the course of this, Birch wrote:

He left behind him a considerable number of manuscripts, which are at present in the hands of Mr Smith, who lived with him several years, and to whom he dictated some of his works. It is greatly to be wished, that those manuscripts may some time or other see the light. One of Mr Boyle's Executors, to whom he left these papers, sent several of them to Dr Wotton, in order to write his Life, which were afterwards returned.<sup>27</sup>

24 Quoted in Maddison, 'Summary', p. 93, and in *Boyle by Himself and his Friends*, p. xl.

25 Ibid., pp. xlv–xlv and 111ff.

26 British Library Add. MS 4224, fols. 165–6, quoted in *Boyle by Himself and his Friends*, pp. xlv–xlv. The claim made in this text that Wotton began the task 'About the year 1701' is obviously incorrect, however.

27 Pierre Bayle et al., *A General Dictionary* (10 vols., London, 1734–41), vol. 3, pp. 546–8.



A commentary on this passage will elucidate the state of the papers at this juncture. It was correct insofar as, on Warr's death in 1715, the part of the archive which was in his possession at that time had indeed been inherited by his chief legatee, Thomas Smith, formerly an employee of Boyle's and latterly an apothecary in the Strand. Moreover, shortly after Birch wrote these words, these papers were placed by Smith in the hands of Henry Miles, a nonconformist minister of Tooting with an interest in natural philosophy, 'with leave to make use of them for the public good'.<sup>28</sup> In 1738, Miles and Birch met, and at some point after this Miles agreed to assist Birch in preparing a life of Boyle and an edition of his works in which unpublished material from the archive would be exploited, as was formally agreed between the two men on 16 July 1741: though the 1744 edition bears Birch's name alone on the title page, much of the preparatory work for it was in fact done by Miles.<sup>29</sup> In 1741 and 1742, therefore, Miles spent much time in sorting, tabulating and transcribing the papers, searching for material appropriate for inclusion in the edition and the accompanying *Life*.

What neither Birch nor Miles realised at this point was that Wotton had returned only part of the material that he had borrowed from Warr. He had held on to the remainder with a view to deploying it for his aborted life, and on his death in 1727 it passed to his son-in-law William Clarke, a prebendary of Chichester. Hence, after initially working on the Warr-Smith component of the archive on the presumption that this was all that survived, Miles had to revise his view during the period when the project was in gestation, since in 1742 he learned that the residue of the papers which Wotton had retained still survived in Clarke's hands: this apparently came to light through information given to Birch by the divine and writer Samuel Knight.<sup>30</sup> Finally, later in 1742, after protracted negotiations, further complicated by the intervention of the putative publisher of Wotton's aborted work, Miles obtained this material as well.<sup>31</sup> This caused certain complications for the preparation of the edition, part of which had already been consigned to the press by this time:<sup>32</sup> items had to be sent to the printers for last-minute insertion, and Miles complained how 'It will be impossible to get some valuable papers ready to be inserted in their

28 Thomas Birch (ed.), *The Works of the Hon. Robert Boyle* (2nd edn., 6 vols., London, 1772), vol. 1, p. ii; Maddison, 'Summary', pp. 101, 107–8.

29 Maddison, 'Summary', p. 97. The memorandum between the two men dated 16 July 1741 is now BP 36, fol. 50 (cf. British Library Add. MS 4229, fol. 79). See also M.B. Hall, 'Henry Miles, F.R.S. (1698–1763) and Thomas Birch, F.R.S. (1705–66)', *NRRS*, 18 (1963), 39–44.

30 See Knight's letters to Birch, British Library Add. MS 4312, fols. 49, 52. It is worth noting that Knight probably never had any of the papers, as against knowing that Clarke did (see Maddison, 'Summary', pp. 101–3).

31 For extracts from the relevant letters in British Library Add. MSS 4229 and 4314, see Maddison, 'Summary'. It is perhaps worth noting that there is no evidence that Bumet had any papers other than biographical memoranda and Boyle's letters to him (cf. *ibid.*, p. 101).

32 Maddison, 'Summary', p. 98. See also *Works*, vol. 1, pp. lxxxvi–lxxxviii.

proper places & how to come off with reputation I know not'.<sup>33</sup> From the point of view of the archive, however, the result was that the two principal surviving components of the Papers were at last reunited. On the other hand, it is possible that, just at this time, a further section was alienated: in 1741, Miles evidently sent chemical papers from the archive to Peter Shaw for him to peruse to see if any were appropriate to the edition. None were included, and it is not entirely clear whether or not they were returned.<sup>34</sup>

It is worth briefly commenting here on Miles' work on the papers at this time. Apart from the biographical data that he furnished for Birch – including Boyle's hitherto unpublished autobiography, 'An Account of Philaretus during his Minority' – it is apparent from his letters to Birch that Miles' principal concern was with the two components of manuscript material which were printed for the first time in the 1744 edition, Boyle's correspondence and the unpublished sections of *The Christian Virtuoso*. This is reflected by the Boyle Papers and Letters. Though various inventories of all or part of the archive that Miles made at this time survive, as we shall see, a disproportionate amount of the extant manuscript material by Miles relates to the letters and to *The Christian Virtuoso*; in the former case, this takes the form of lists and abstracts, in the latter of transcriptions, to be found especially in BP 5 and BP 7. In both cases, Miles clearly did a great deal of work – in the latter, despite anxieties that the text was so fragmentary that it was dubious whether it was worth publishing at all – and both texts were specifically referred to in Birch's preface as 'very considerable additions' to the collected *Works*.<sup>35</sup>

In addition, Miles and Birch drew attention to the existence of manuscripts other than those which they published by appending to the list of contents of the edition a 'List of the Titles of the MSS of Mr Boyle', about which the preface, after briefly outlining their descent, explained:

These manuscripts are very numerous, but many of them written while the Author was very young, and few completed. However I shall subjoin to the *Contents* the list of them as drawn up by his own order, all of them being still extant, except those marked with an asterisk before them.<sup>36</sup>

This list has often been cited, and it may be of interest to note here that the manner in which Miles compiled it can be reconstructed by collating it with surviving manuscripts in the archive, including Miles' own draft, which is now BP 36, fol. 155. Miles evidently began by transcribing the list of Boyle's unpublished writings compiled on 3 July 1691 which survives as BP 36, fol. 72;

33 Miles to Birch, 5 Nov. 1742, British Library Add. MS 4314, fol. 72.

34 Maddison, 'Summary', p. 105; British Library Add. MS 4229, fols. 127, 134.

35 Birch (ed.), *Boyle*, vol. 1, p. ii. See also British Library Add. MS 4229, fols. 109, 138 and passim, Add. MS 4314, fols. 74, 84 and passim; and *Works*, vol. 12.

36 Birch (ed.), *Boyle*, vol. 1, pp. ii, ccxxxvi–ccxxxviii.

but he then went on to add items from similar lists dating from earlier in Boyle's life, without considering whether works might have been renamed or reconstituted over the intervening years, and the result is a hybrid which deserves to be treated with more caution than has been the case hitherto. Moreover, comparison between Miles' draft and the printed version reveals revisions and second thoughts on his part – including the insertion and removal of asterisks – which throw further doubt on the reliability of this much-cited source.<sup>37</sup>

Miles died in 1763, and in 1769 his widow presented the entire surviving collection of Boyle manuscripts to the Royal Society. The Society's journal book records that on 9 November 1769 'A large Collection of Original letters and Papers of the Hon. Robert Boyle and his Friends; contained in six Boxes' was 'presented by Mrs Miles, relict of the late Dr Miles of Tooting, by the hands of Mr Canton [i.e. John Canton, FRS]', and a brief announcement to similar effect was made in *Philosophical Transactions*.<sup>38</sup> Thus the archive came into the possession of the Society, where it has remained ever since. On the other hand, little appears to have been done with it for nearly a century. It was evidently only in the mid nineteenth century that the Papers were arranged in the 46-volume form in which they survive today, while, as we shall see below, it seems likely that work was also done on the letters at this time. A clue to the exact date at which this occurred is provided by the binding style of the Boyle Papers until their recent rebinding. This was a distinctive green parchment, and it can be paralleled in other Royal Society manuscripts whose binding can definitely be dated to the 1850s. Three such volumes (MSS 392, 394 and 395) have the legend 'Bound 1856' on their title page, while another (MS 351) has '1857'; it should be noted that the Society's accounts show large sums of money being disbursed on binding in these years.<sup>39</sup>

Further evidence that it was at this time that work was done on the Boyle Papers is provided by the fact that a copy of the Gravelot engraving of Boyle from the title page of the Birch edition, which is now loosely inserted in the Society's 'Newtoniana', vol. 3, fol. 66, is endorsed in pencil: 'found among Boyle's papers 1855'. It is probably not coincidental that this belated attention to the material occurred shortly before the Society's move to Burlington House in 1856–7, during the regime of C.R. Weld, author of the first full history of the Society, who became Assistant Secretary and Librarian in 1843, and Walter White, appointed his assistant in 1844.<sup>40</sup> It was evidently these men who were responsible for the rearrangement of the Papers which occurred at this time

37 See *Works*, vol. 14, pp. xlvii–xlviii, 356–8.

38 Royal Society Copy Journal Book, vol. 26, p. 664; *Phil. Trans.*, 59 (1769), xix.

39 I owe this information to Alan Clark. Other bindings in the same style comprise MSS 350 and 393 and Royal Society Letters 1737–99.

40 H.W. Robinson, 'Administrative Staff of the Royal Society, 1663–1861', *NRRS*, 4 (1946), 203–4; M.B. Hall, *All Scientists Now* (Cambridge, 1984), pp. 80, 97, 99.



and which will be discussed in the next section. The Boyle Papers were rebound in 1990, at the time when they were microfilmed for the microfilm edition of the archive published in 1992 by University Publications of America; earlier, the letters had been mounted in guardbooks and most of the notebooks had been rebound at some point in the mid twentieth century.

Though the collection has been available in a form suitable for study for nearly a century and a half, its use for scholarly purposes is much more recent. It is said that when the Papers were shown to Louis Trenchard More, the American scholar whose biography of Boyle was published in 1944, he blanched and turned away at the sight of the outsides of the volumes, without opening a single one of them.<sup>41</sup> The beginnings of the exploitation of the archive came with the more intensive interest in the history of science in the postwar years, surveyed in the previous section. A pioneer was R.S. Westfall, who not only made reference to the Papers in his *Science and Religion in Seventeenth-century England*, but also produced a whole article based on material from the collection entitled 'Unpublished Boyle Papers Relating to Scientific Method' (*Annals of Science*, 1956). Marie Boas Hall similarly deployed material from the Papers in the works that have been referred to, while she was subsequently to return to the archive, publishing a crucial text for the first time in 1987.<sup>42</sup> Similarly, in her article published in 1963, Rosalie Colie included a substantial appendix of unpublished material (though, regrettably, some of the volume numbers given are incorrect), while some use of the collection was also made by M.A. Stewart in his *Selected Philosophical Papers of Robert Boyle* of 1979. In addition, extensive use of the archive was made by R.E.W. Maddison, both for his biographical studies of Boyle and for his 'Tentative Index of the Correspondence of the Honourable Robert Boyle, F.R.S.', published in *Notes and Records of the Royal Society* in 1958. Indeed, Maddison's work on the letters provided the basis for the successful completion of the edition of *The Correspondence of Robert Boyle* that came out in 2001, since he also produced typescripts of a large number of hitherto unpublished letters which it proved possible to scan optically as the basis of the fully checked, annotated and (where appropriate) translated text that ultimately materialised.

If Maddison's 'Tentative Index' provided a useful guide to Boyle's correspondence from 1958 onwards, it was precisely a finding aid of this kind that was lacking as far as the Papers and notebooks were concerned, inhibiting their proper use. In the absence of this, individual scholars each had to leaf through the material piecemeal, finding what they could, a practice which was neither efficient as a means of locating relevant material, nor good for the manuscripts. Indeed, though some made rudimentary handlists of their own, others doubted whether it was feasible to provide a guide to this material at all,

41 I owe this story to Dr Marie Boas Hall.

42 M.B. Hall, 'Boyle's Method of Work: Promoting his Corpuscular Philosophy', *NRRS*, 41 (1987), 111–43.



such as M.A. Stewart, who described the collection as ‘uncatalogued and uncataloguable’.<sup>43</sup> In 1984, however, I determined to prove such estimates wrong. With grant aid from the Royal Society and the Wellcome Trust, and with sterling assistance from Tim Venning, I set to work to produce a proper catalogue of the archive. The bulk of this work was carried out in 1986 and 1987; this involved, first, the compilation of a very detailed – almost page by page – calendar of the entire content of the Boyle Papers and notebooks, along with ancillary tasks such as the foliation or refoliation of certain volumes, and, secondly, the epitomising of this data into a more usable finding list. The section of the latter dealing with the Boyle Papers was issued to interested parties in draft form in the summer of 1987, and was subsequently published in revised form in 1992, taking account of comments received on the provisional version, together with a comparable guide to the notebooks (of which no equivalent draft had been circulated). The 1992 version also included the original version of this essay, including the crucial section on dating and handwriting which appears in revised form below, which had no equivalent in the draft circulated in 1987, and this, too, was calculated to enhance informed use of the archive.

The 1992 catalogue was issued in conjunction with the publication of University Publications of America’s microfilm edition of the Boyle Papers, Letters and associated manuscripts, and there can be no doubt that the availability of this resource in scholarly libraries throughout the world did much to enhance the accessibility of Boyle’s manuscripts, thus helping to explain the burgeoning of Boyle studies over the subsequent decade that has been alluded to in the previous section. The availability of this resource greatly assisted the processes of identifying and tabulating material in the archive, of collating it with Boyle’s published writings, and of transcribing hitherto unpublished material, which formed the basis of the 1999–2001 editions of Boyle’s *Works* and *Correspondence* and of such ancillary projects as Principe’s edition of alchemical material, mine of biographical and other items, and Jack MacIntosh’s *Boyle on Atheism*. In particular, one of the features of the new edition of the *Works* is a series of tables produced by Ted Davis which give a complete list of manuscripts in the Boyle archive relating to each of Boyle’s published works; the document in question was then collated with the printed text, variants noted and discarded material transcribed in footnotes. Indeed, this work itself ironically made the original catalogue increasingly outdated, in that items which had necessarily been described there in a generalised way – for instance, ‘incomplete section of text dealing with the curability of diseases and strengths and weaknesses of different medical schools’ (BP 28, pp. 209–35) – could be precisely identified. Thus in this case the text proved to be a

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43 M.A. Stewart, ‘The Authenticity of Robert Boyle’s Anonymous Writings on Reason’, *Bodleian Library Quarterly*, 10 (1978–82), 280–9, on p. 283.

manuscript version of the first half of Essay III of Part II, section 1, of *Usefulness*, of which a further copy survives in BP 16, fols. 202–21; it was published on pp. 70–84 of the 1663 edition of that work and pp. 332–42 of volume 3 of the 1999–2000 edition of the *Works*, preceded by a lengthy introductory section not found in the manuscript, while some material was added to the printed version thereafter.<sup>44</sup>

In a sense, then, the catalogue now presented in this volume, which is also available online in fully searchable form on the Royal Society website and hence through Access to Archives, has come full circle. The initial cataloguing of the archive in the 1980s made possible the intense exploitation that has occurred since; now, the fruits of this have been merged back into the catalogue in the form of a complete set of references to relevant passages in the *Works* and *Correspondence* and the ancillary editions of related texts. The result is to make it a more complete and accurate tool than ever, as far as Boyle's own writings are concerned. Of course there are many further identifications to be made, particularly of items that Boyle owned rather than wrote, but the current version represents a real step forward in terms of tabulating the relationship between the content of the archive and Boyle's published writings. Its preparation has formed part of a project funded by the Heritage Lottery Fund which has also made possible the publication on the Boyle website at Birkbeck (itself in existence since 1997) of digitised images of the core volumes of the Boyle Papers. These full-colour images represent a distinct improvement on the old microfilms, albeit of only part of the archive: it is to be hoped that, before long, the rest of the archive will comparably be made available in digitised form.

## Survival, Arrangement and Cataloguing

### *The Boyle Letters*

The inventories of Boyle's papers in his last years that have already been referred to show that among these were a number of bundles specifically identified as containing letters. Apart from one which is said to have contained letters to Oldenburg, however (BP 36, fol. 122v), it is not clear either what these comprised or how they were arranged. It is also unclear how systematically letters were separated from other material, since there is some evidence that in the early eighteenth century the letters and other manuscripts were confused together.<sup>45</sup>

44 See *Works*, vol. 3, pp. xxiii–xxiv.

45 For instance, BP 4, fols 132–5, was formerly with the Barlow letters now in BL 1. Cf. BL 2, fol. 63, where Miles refers to what is evidently now BL 3, fols. 23ff., as being 'among the Papers'.

Information about the state of the correspondence after Boyle's death is available from surviving inventories of the letters by both Wotton and Miles, most of them in BP 36. Wotton's list (BP 36, fols. 180–9; Plate 15) comprises an extensive series of letters arranged in chronological order, followed by groups of undated letters, 'Letters &c. concerning Translations of the Bible in several Languages' and family letters, and, last of all, an index of names.<sup>46</sup> Whether the letters were physically arranged in the order given in the list is unclear, not least since it appears that, having made this list, Wotton did not then retain all the letters in it, as Miles had already selected 311 for publication from the series which had belonged to Thomas Smith before he obtained those that Wotton had retained and was able to marry the two together.<sup>47</sup> Miles' own lists are rather scrappier than Wotton's, listing letters in no particular order, though in mitigation it has to be pointed out that it was unfortunate that Wotton's aborted project had led to the archive being split in two.<sup>48</sup> Most of Miles' lists appear to consist of notes that he made while deciding which letters were suitable for publication in the 1744 edition, which were there grouped according to correspondent; a number that were not so printed are marked 'No worth' or 'N.W.' Some of the lists, on the other hand, may itemise letters that Miles came across during work on the archive after the edition had gone to press.

Since the 1744 edition (and its 1772 reprint) was the main printed repository of Boyle letters until superseded by *The Correspondence of Robert Boyle*, it is worth indicating here the relationship between Birch's selection and the Boyle Letters. There are several hundred letters to or from Boyle in the archive, while several hundred letters are printed in the edition. On the other hand, many letters in the archive did not appear in the edition, while quite a high percentage of the printed letters do not now survive, and various observations may be made on this. In their choice of material for inclusion, Miles and Birch were naturally most interested in the letters of eminent scholars and others with whom Boyle had been associated, their coverage being most complete for figures like Thomas Barlow, Gilbert Burnet and Joseph Glanvill. Their focus was somewhat insular: Miles tended to neglect letters in such languages as French or Italian, which he confessed he could not read.<sup>49</sup> The letters of nonentities were also disproportionately neglected, but even for major figures the selection of letters for publication was slightly erratic; thus, though most of the letters to

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46 This is now published in *Correspondence*, vol. 6, pp. 397–414.

47 British Library Add. MS 4314, fols. 62, 70: the latter also implies that the letters that Miles obtained from Clarke were alphabetically arranged. See also *Correspondence*, vol. 1, p. xiv and n. b.

48 For Miles' lists, see BP 19, fol. 137; BP 35, fols. 134–5, 158; BP 36, fols. 133–4, 144–5, 150–4, 161–2, 172, 197. See also British Library Add. MS 4229, fols. 71–3, 77–8, 88–9. See also *Correspondence*, vol. 1, pp. xxvii–xxxi.

49 British Library Add. MS 4229, fol. 150. Cf. item 37 in the Miles-Birch list of unpublished MSS in *Works*, vol. 14, pp. 357–8.



Boyle from Thomas Barlow were published, one was not – either because it came to light after the edition had gone to press, or because it was overlooked owing to the haphazard state of the papers.<sup>50</sup>

Equally – and frustratingly – erratic is the survival of letters which were published in the 1744 edition and of which the original manuscripts must therefore have been extant at that point. Indeed, Miles asked Birch to give the printers strict instructions to keep the originals of all the letters, ‘because they are most of them to be sent to the R.Society’;<sup>51</sup> but only a proportion of the originals of the printed letters now survive. Since those now missing include all the letters of such illustrious correspondents of Boyle as Isaac Newton, John Locke and Samuel Hartlib, and all but one of those of Robert Hooke, it might almost seem as if these letters had been systematically culled by a collector. But other letters which have disappeared are of nonentities, while in other cases a random selection survives, as with Thomas Hyde, Sir Paul Rycaut, James Tyrrell and Lady Ranelagh. Exactly when these losses occurred is uncertain; though it is perhaps likeliest that they were never returned by the printer, it is possible that they disappeared later, since Miles specifically expressed the wish to preserve Hartlib’s letters in a guardbook for the Royal Society more than a year after the volume of the edition in which the letters appeared had been printed.<sup>52</sup>

In the case of two sets of letters, Miles took considerable trouble over their preservation. One was the volume that is now BL 7, a series of letters supplementing those in BL 1–6, most of them neither to nor from Boyle, which Miles evidently came across while sorting through the Boyle Papers. Miles had these placed in date order in a special guardbook with, at the start, a manuscript list of contents and a note dated 23 April 1747 in which he explained that these letters were ‘found among the papers of the Honourable Mr Boyle; which not being sent to him (a very few excepted) were not inserted in the late collection of his works’, and expressed the hope that they might be useful for writing the history of the Royal Society. Miles had already done the same for a further set of letters, those to Boyle from John Beale and Henry Oldenburg, which he treated in a similar manner in a volume that now forms Early Letters OB. This has a comparable list of contents and a note dated 20 August 1745, and Miles evidently presented it to the Royal Society later that year with a covering letter to the President dated 24 October in which he again expressed the hope that the collection might prove useful to future historians of the Royal Society, quite apart from its intrinsic interest.<sup>53</sup>

50 BL 3, fols. 164–5, now published in *Correspondence*, vol. 5, pp. 414–15.

51 British Library Add. MS 4314, fol. 74.

52 British Library Add. MS 4314, fol. 95 (4 June 1744); Maddison, ‘Summary’, pp. 98, 106.

53 Miles to Martin Folkes, 24 Oct. 1745, Royal Society, Letters & Papers, I. 415. Though he there announced that he was preparing what is now BL 7, no subsequent letter survives, so it is unclear whether or not BL 7 reached the Society before the main group of papers in 1769.



There is no reason to think that Miles was responsible for the preparation of the current volumes 1–6 of the Boyle Letters, which lack introductory matter of this kind. The letters that are now arranged alphabetically in these must have come to the Royal Society with the Boyle Papers as a whole in 1769, but how they were organised at that point is unclear. At the beginning of the current volumes are two sets of manuscript lists, evidently of mid-nineteenth-century date, one on blue paper, the other on lined sheets of white paper; the latter are in the hand of the assistant librarian, Walter White.<sup>54</sup> The preparation of these probably accompanied the process of sorting, and the set of lists on blue paper must be the earlier of the two, since, in contrast to the ones on white paper, they record an ordering of the letters different from the present one, not least in not being coterminous with the existing volumes: the Boyle items come first, before ‘A’, rather than being at the appropriate place in the alphabetical sequence; the lists now in volumes 3 and 5 include items now in volumes 2 and 4 respectively; there is a ‘Supplement’ at the end of items now redistributed in the main sequence, while some items listed as being with the letters now in volume 6 are to be found in earlier volumes in the series. Since the order given in the lists on white paper is identical with the present one, it was presumably in conjunction with the compilation of these that this was achieved. The content of each volume is expounded more fully in the typed lists of twentieth-century date which follow; these appear to date from the time when the letters were most recently rebound.

Lastly, we may return to the question of the completeness of this part of the archive. As well as the letters of which the originals are lost but the texts of which fortunately survive because they were printed in the 1744 edition, it is clear that the collection as we have it today lacks many other letters which existed at the time of Miles and Wotton. This is shown by the lists which survive in BP 36 and which have already been referred to, particularly Miles’, which often includes brief notes of the content of the letters involved; whether they were lost before or after the archive reached the Royal Society is unclear, though on balance the former seems likelier. These items have been recorded in full in the new edition of the *Correspondence*, and they are briefly discussed in chapter 2 below.

### *The Manuscripts and Notebooks*

This part of the archive comprises a group of items of distinctive format, in that each constitutes a discrete unit which has apparently always been individually bound. On the other hand, evidently partly because of this, they have long been separated from the Boyle Papers and Letters with which they

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54 For examples of White’s hand, see Royal Society Miscellaneous Manuscripts 19, fols. 96–100. The lists on blue paper *may* be in the hand of J.O. Halliwell, but comparison with other examples of his hand is not conclusive.

presumably reached the Royal Society in 1769 and have instead been absorbed into the Royal Society's general manuscript series. This has led to some confusion as to exactly what the boundary of the group is. The items included in the University Publications of America microfilm edition of the Boyle archive and covered by the 1992 catalogue included most, but not all, of the items that may now be recognised as properly belonging to the collection. Our recognition of this stems particularly from the important study by Lawrence M. Principe, 'Newly Discovered Boyle Documents in the Royal Society Archive: Alchemical Tracts and his Student Notebook', published in *Notes and Records of the Royal Society* in 1995, which crucially supplemented the treatment of this topic in the 1992 version of this essay. In it, Principe published and analysed in full the list of 'Bound books' made by Henry Miles which is now BP 36, fol. 196. On this basis, he was able to identify a number of key Boyle items in the Royal Society's general manuscript series which had hitherto been overlooked. All of these items are included in the revised version of the catalogue and this section of this essay has been rewritten to take account of Professor Principe's crucial work, while, with his permission, his transcription of Miles' list and his accompanying concordance of that with the entries in more recent catalogues of the miscellaneous manuscripts has been included as appendix 1.

From this list it is apparent that the manuscripts of Boyle's *Aretology* and other early writings which adjoin it in the general manuscript series were in Miles' possession at that stage, as were various other items, including notebooks described as having ties of green (and black) string which tally with internal references in some of the notebooks themselves, though such ties have long since disappeared in the course of rebinding.<sup>55</sup> It is perhaps worth noting that this list describes some items as 'sing[ing] book[s],' presumably because of their oblong format (for an example, see Plate 10). Also extant are such more miscellaneous items as a volume of alchemical tracts formerly owned by Sir Kenelm Digby, with his distinctive tooling on its binding; the 'Clodius' commonplace book dated 1663 which is now Royal Society MS 22; and – perhaps most crucially – the vellum-bound notebook that Boyle kept while he was a student in Geneva in the early 1640s, which was completely unknown prior to the publication of Principe's article.<sup>56</sup> On the other hand, Miles' list also includes items that apparently no longer survive. A number of these were printed books, which may have been discarded because they seemed out of place in a collection of manuscripts. However, this leaves two crucial items, one, described as 'Copies of Severall Letters of Mr B. to friends 1645 & 46', possibly an early letterbook of Boyle's (or a bound copy of some of the

55 MS 186, fol. 1v; MS 189, fol. 67v.

56 See Principe, 'Newly Discovered Boyle Documents in the Royal Society Archive', *NRRS*, 49 (1995), 57–70, esp. pp. 58–63. In the case of MS 22, the description of the content of this volume in the list exactly corresponds with a note on its cover in Miles' hand.

compositions in epistolary form that *do* survive in the archive); the other ‘a little one 12<sup>mo</sup> without covers against Romances damagd’: as Principe has pointed out, this is probably Boyle’s lost *Antagonist of Romances*, of which Miles saw two copies, at least one in ‘Mr Bs hand’, hence rendering this loss particularly frustrating.<sup>57</sup>

Allowing for such losses, the items from Boyle’s collection that now survive constitute MSS 10, 22–3, 25–6, 38, 40, 41, 43–4, 137–8, 179–81 and 185–99 in the Royal Society general manuscript series. It should be noted that MS 23, the catalogue of John Warr’s library which is discussed in appendix 2, below, almost certainly arrived with the Boyle manuscripts, as with other items in the archive associated with Warr and his father.<sup>58</sup> It is also appropriate to include MS 200, a list of the collection of minerals that Boyle bequeathed to the Royal Society, evidently made by the Society’s Operator, Henry Hunt. Though, on receipt of this bequest in 1692, the Society made enquiries about the survival of a catalogue to which marks on the stones apparently referred, nothing appears to have come of this.<sup>59</sup> Instead, Hunt must have set to work to produce this catalogue of his own, which has presumably been at the Royal Society ever since.

The absorption of these items into the manuscript collection began at some date prior to the time when J.O. Halliwell compiled his catalogue of the Society’s manuscripts, published in 1840. A total of sixteen of these items can be identified in his catalogue, ten in the main series and six more in the supplement to it, namely nos. 22–3, 25, 38, 40–4 in the main series, and nos. 8–13 in the appendix.<sup>60</sup> The fact that MSS 41 and 43 formerly flanked a volume, MS 192, which at some later date has been moved to the ‘main’ Boyle series confirms their integrity to the Boyle collection, though it is unclear why these were left in the main sequence when their neighbour was moved. This leaves fifteen items which were not referred to at that point, but there seems no reason to doubt that they have been at the Royal Society since 1769; probably, they were mixed up with other Boyle material until the main series of papers was sorted and bound in the 1850s. Many of the volumes have been rebound in the twentieth century, though others retain their original bindings, including the Digby item already referred to and MS 43, which has been rebaced but still retains its original vellum binding entitled ‘Short Notes for Entrys’.

57 See Principe, ‘Newly Discovered Boyle Documents’, pp. 63–4. The printed books may have been removed to the Society’s library, though none now survives.

58 See below, pp. 50, 64.

59 Maddison, *Life*, p. 201.

60 J.O. Halliwell, *A Catalogue of the Miscellaneous Manuscripts in the Library of the Royal Society* (London, 1840). The identity of MS 187 is especially clear, since the catalogue entry refers to the content of fols. 141–2. There are pencil references giving the numbers appearing in the Halliwell catalogue in MSS 186 (fol. 188v) and 192; MS 189 has ‘?Ap. 9,’ as if an intermediate cataloguer was unsure of its identity.



*The Boyle Papers*

Compared with both the Letters and individual manuscripts, the arrangement of the Papers is – and always has been – much more problematic. Whereas notebooks form discrete volumes, while letters tend predominantly to be on single sheets of paper and are easily identified and sorted by their author and/or date, the same could hardly be less true of Boyle's papers, owing to the diversity of the material in the collection. As we shall see in more detail below, this ranges chronologically from Boyle's adolescence to the last months of his life, though relatively few items are actually dated; it also includes treatises and papers with only a tangential connection to Boyle, in addition to his own very disparate notes and drafts. The result is to give the whole archive a superficial appearance of chaos, which has struck virtually all commentators from Boyle's time to ours. Less than eight years after Boyle's death, William Wotton was complaining of the disorganised state of the collection, telling John Evelyn in a letter of 8 August 1699: 'His Papers were truly, what he calls many Bundles of them himself[,] a Chaos, rude & undigested many times God know's.'<sup>61</sup> Henry Miles similarly complained of the state of the manuscripts, though, as we shall see, he rather unfairly tended to blame this on Wotton; and similar comments on the 'disarray' of the archive have been made in this century.<sup>62</sup>

On the other hand, it is worth investigating whether, underlying the apparent chaos, the archive had a rationale in Boyle's own hands, with a view to assessing whether any vestiges of such an ordering remain today. The obvious source for this are the various inventories of the papers made during Boyle's lifetime which survive in the archive and which have already been referred to: these include lists dating from the 1660s, a pair made by Oldenburg in 1677, a further 'Catalogue' of 1684, and various items dating from the last year of Boyle's life, together with copies and ancillary drafts.<sup>63</sup> At the outset a caveat is needed, since careful study of these suggests that, though providing a vivid sense of the physical state of Boyle's manuscripts, none of them appears to be a complete inventory of the archive. Most of them list the content of five or fewer boxes, and they appear to be focused on material related to topics or treatises that Boyle was working on at the time when they were made, implying that other papers existed elsewhere in Boyle's house or in his adjacent laboratory. That there were manuscripts in the laboratory is clear from the printed *Advertisement* that Boyle issued in 1688 attributing the disorganised state of his publications not least to the damage that the papers had suffered there.<sup>64</sup>

61 British Library Add. MS 78685, no. 112.

62 Hall, 'Henry Miles and Thomas Birch', p. 42 (though in this case the blame for it was placed on nineteenth-century librarians).

63 BP 36, esp. fols. 59–61, 72–3, 88–9, 91, 114, 119–23 and 177, all now published in *Works*, vol. 14, pp. 327ff. See also Hunter, 'Mapping the Mind'.

64 *Works*, vol. 11, pp. 169–71.

It is also noticeable that the longer inventories, particularly that of 17 September 1691, have peripheral material, including Latin translations of Boyle's writings, bundles of letters and the like, which do not occur in the more succinct ones, while close comparison of the different inventories suggests that, even during the months of 1691, the content of boxes changed, certain items evidently being removed to more peripheral repositories, the contents of which are unknown.

In spite of this, however, the inventories do provide certain clues as to how Boyle arranged his papers. The content of the archive seems to have fallen into various categories, which had a clear rationale in terms of Boyle's method of composition, even if this might not have been very apparent to a superficial observer. Many of the bundles comprised material collected together as relating to a specific topic: on pores and porosity, for instance, or on inflammability, or on the transmutation of metals. Sometimes these represented treatises on which Boyle was working, or notes which he intended to write up more fully in the future; sometimes, on the other hand, things seem to have worked the other way round, and treatises which he compiled quite early on but never published – or sections that he discarded – formed quarries for his later writings. A case of this is provided by his book 'Observations upon the Causes and Pretences and Remedies of Atheisme', proudly described as a treatise with that title to Oldenburg in 1677 and reiterated as such in the 'Catalogue' of 1684. By 1691, however, as a result of successive raids on the work for other treatises, particularly his *Disquisition about the Final Causes of Natural Things*, published in 1688, this had degenerated into 'An imperfect and mutilated Discourse containing Considerations about some Causes of Atheism', and it has been left to Jack MacIntosh to do his best to reconstruct it from the extant fragments.<sup>65</sup>

Secondly, there was a vast arsenal of data in the form of experimental notes, recipes, notes on books, reports of conversations that Boyle had with informants who had visited exotic places or witnessed unusual events, or even simply thoughts that had occurred to him and which he had written down while they were in his mind. By definition, such material tended not to be neatly classified by subject, but to be more of a bank of miscellaneous data on which Boyle made periodic raids in search of relevant information on a topic currently in hand. This comprised Boyle's workdiaries and associated materials, including the recopied extracts from them that we will consider in chapters 3 and 4 both in their own right and in conjunction with Boyle's attempts to classify and access this material. As we will see there, even Boyle admitted that this was by definition difficult, in view of the intrinsic diversity of the material. It was evidently to describe compendia of this kind that Boyle used the term 'Chaos' which Wotton echoed in the comment on the archive already quoted.

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65 Ibid., vol. 14, pp. 339, 341, 345, 352. See above, pp. 10, 21.

Yet this was clearly a key element of the archive, providing raw material rather similar to that furnished to more literary scholars of the day by the commonplace books that they made, but appropriately empirically-oriented for one who prided himself, in Evelyn's words, 'as learning more from Men, Real Experiments, & his Laboratory ... than from Books'.<sup>66</sup>

Thirdly, there appear to have been groups of prefatory material. In the inventory of 17 September 1691 is a reference to 'a thin Folio, containing many Prefaces, Advertisements & such like Papers of great use for understanding the scope & method of many of Mr Boyl's unpublish'd writings', and this is echoed by comparable items in earlier lists. Here, we arguably have an intermediate category between those already outlined, comprising the germs of works waiting until the time was ripe for them to be converted into items in the first category by the addition of material from the great arsenal of data in the second. Lastly, there were the various transcripts and more miscellaneous materials that Boyle kept, a number of which are referred to in different inventories.

Some of these categories are still vestigially recognisable in the archive today, including certain of Boyle's collections of experimental notes and observations, his groups of papers related to specific topics, or his transcripts: for example, the item that is now BP 23, pp. 307–473 is clearly referred to in the inventory in BP 36, fol. 122v, when it was 'rol'd up & ty'd with Packthred'. On the other hand, much of the ordering has been lost. Indeed, whereas the archive as it existed in Boyle's hands had a coherence and flexibility through its interrelationship with his creative processes, material from different categories being able to be recombined at will, this was highly vulnerable in the hands of anyone other than its originator, to whom a system of classification which was so intimately bound up with the mind of its creator was bound to seem somewhat chaotic.

Hence, from the time of Wotton onwards there has been a succession of well-intentioned attempts to tidy up and to rearrange the archive, continuing through Miles to the time when the present order was fixed in the mid nineteenth century. The result, it may be said, is to give us the worst of both worlds, since these efforts have failed to rationalise the material while at the same time depriving us of evidence that might otherwise have been available as to exactly how Boyle arranged the papers himself. Those using the archive should beware of presuming that any grouping within it goes back to Boyle's time; though in some cases it may, it is equally likely that it does not. Physical clues to Boyle's arrangement – such as original cover sheets – occur only rarely; even when they do, it is unclear whether they are still adjacent to the papers to which they were originally attached, while it is also disconcerting to find obviously extraneous material in the middle of otherwise coherent groups. All conclusions from juxtapositions within the archive should therefore be treated with extreme care.

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66 *Boyle by Himself and his Friends*, p. 88.



Some of the stages in the process of reorganisation are apparent from the endorsements that appear on many items in the archive, which provide evidence of previous phases of classification, perhaps particularly that of Wotton. Wotton endorsed many items in his distinctive hand, which, as already noted, can be identified by comparison with documents by him in other archives. Just as he often wrote a brief summary of the content of the letters on their cover sheet, so he frequently identified items in the Papers on their last leaf. Some of his notes are quoted in the catalogue, since the information that they contain is of value. Others give the equivalent in Wotton's words of the descriptions provided there. For instance, to take an example at random: 'Latin Version of [the] two first Essay's in [the] first Volume of Usefulness of Experimental Philosophy' (BP 11, fol. 172v), or, more generally, 'loose Notes Theological' (BP 4, fol. 89v).

Wotton also appears to have divided the material up into bundles, which were then often further classified 'Philos.' or 'Theol.', though in other cases they simply had 'B.' (evidently for 'Bundle'), as in 'B.5. No 2' (BP 27, p. 314). A typical endorsement would thus read: 'Ph. 8. No XVI' (BP 29, fol. 219) – that is, the sixteenth item in the eighth file of philosophy – or 'Th. 8 No. V' (BP 6, fol. 220v) – that is, the fifth item in the eighth theological file. In addition, there is a further series of classifications in the form 'C.21', which also appear to be by Wotton and which in at least some cases seem to supersede markings of the type just described. They perhaps reflect a further reordering of the material on his part during the lengthy period when he worked on the manuscripts. Unfortunately, since no inventory of the Boyle Papers by Wotton has been found, it is unclear what the rationale of his arrangement was. A further complication is that Wotton retained only part of the letters and papers, and we do not know what he selected, or how, and how the remainder were treated.

Just how directly Miles inherited Wotton's classification is unclear. That a degree of disruption occurred between Wotton's work on the collection and that of Miles may be suggested by Miles' complaints in letters to Thomas Birch and to the publisher of the 1744 edition of Boyle, Andrew Millar, after he had received the manuscripts which had been in Wotton's hands in 1742. He found these, he claimed, 'in utter confusion, tho' bundled up in form, with superscriptions, which made *me* imagine they were regular and perfect, till an examination of them undeceivd *me*'; subsequently he added how his work of extracting materials for the edition 'took up much more time than otherwise it woud, by reason that Dr Wotton or some friend of his, had strangely confounded the papers, which I did not once imagine as they were bundled up in distinct parcels and titled, till I found it by an accident, this has obligd *me* to take the work to pieces again'.<sup>67</sup> This may mean that the papers had been disorganised between Wotton's work and Miles' acquisition of them, or it may

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67 British Library Add. MS 4314, fols. 73, 76 (letters of 17 Nov. 1742, 3 Jan. 1743).

simply reflect false expectations on Miles' part as to what degree of order was appropriate: either way, it is indicative of the apparent disarray of the archive at this stage.

Miles' attempts at sorting are revealed by occasional endorsements in his hand, while we also have various inventories of the papers by him. As already noted, his interest was particularly in the unpublished part of *The Christian Virtuoso*, and his most intensive work appears to have been done on the theological component of the archive; thus the current arrangement of BP 1, in which a good deal of *Christian Virtuoso* material is to be found, clearly owes much to Miles, while in BP 3, fol. 147v, for instance, is to be found a note by him, 'to be put into T', which evidently shows him at work sorting. The inventory that survives from Miles' initial work on the manuscripts (BP 36, fols. 157ff., printed as appendix 1 to chapter 2, below; Plate 16), suggests that Miles divided the material up into a series of bundles denoted by the letters of the alphabet, followed by a second series starting with 'Aa'; a handful of cover sheets or slips so marked survive (for example, BP 26, fol. 100c; BP 38, fol. 82). On the other hand, the contents of the different bundles is often highly miscellaneous, combining transcripts from books and original material of Boyle's, and sometimes even juxtaposing theological and philosophical material; the list may reflect how Miles found the Papers as much as how he intended to leave them, not least since there is some evidence within the document of regrouping on his part. It is in any case apparent that the inventory describes only part of the archive, since a further inventory survives (BP 36, fols. 141–3 and 163–4, printed as appendix 2 to chapter 2), which evidently lists material acquired from Wotton in 1742; this designates items by number.

The present arrangement evidently reflects a further sorting. That the papers as currently arranged are often not as Miles left them is indicated by cover sheets marked by him as containing material which is no longer in that part of the archive at all (for example, BP 28, p. 412), while volume 5 of the Boyle Papers contains a list in Miles' hand with some similarities to the current order but some differences from it (BP 5, fol. 112). It is also worth pointing out that material in Miles' hand which clearly originated together is now split between volumes 5 and 7. Possibly this may reflect further mishandling between Miles' work for the 1744 edition of Boyle's *Works* and the bequest of the archive to the Royal Society: that no system at all was apparent when the Society acquired it in 1769 is suggested by the fact that at a Council meeting on 17 May 1770 it was 'Ordered that the Papers of Mr Boyle &c. lately presented by Mrs. Miles, be fixed in guard Books Chronologically, for their due preservation and use'.<sup>68</sup> On the other hand, it is more likely that what was crucial was a decisive, fresh attempt at organisation at the time when the Papers were bound.

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68 RS Copy Council Minutes, vol. 6, p. 75.

As has already been noted, this can be dated to the 1850s, and it was certainly at this date that the highly inadequate contents leaves that appear at the beginning of most volumes in the series were provided; these match the later of the two mid-nineteenth-century sets of contents leaves to the Boyle Letters, thus showing that work on the two components of the archive proceeded in parallel. The author of these lists, as already noted in connection with the Boyle Letters, was the assistant librarian, Walter White; his journal, published by his son, gives a Pooter-like view of the high culture of his day, and the author of this would certainly have been capable of the classification we now have.<sup>69</sup> As well as being sorted by size – with quarto material being separated from folio – the papers were also divided up according to subject matter into five rather artificial categories, ‘Theology’, ‘Science’, ‘Philosophy’, ‘Physiology’ and ‘Miscellaneous’. These were reified by being embossed on the spines of the volumes, and they have therefore been recorded in the catalogue included in this volume, but it should be made clear that they have only a very limited mandate from Boyle. Though it is true that in memoranda relating to his will, Boyle speaks of ‘Oversight of my writings Theol[ogical] Philos[ophical] Chymicall, Medic[al] &c.’ (BP 36, fol. 178; cf. *ibid.*, fol. 87), while in lists of his unpublished writings he tended to divide these into ‘Philosophical’ and ‘Theological’ categories, such distinctions were never very watertight. Moreover, the demarcation in the nineteenth-century classification between ‘Science’ and ‘Philosophy’, evidently intended to separate experimental from theoretical material, is as characteristic of the nineteenth century as it is alien to Boyle. These titles should therefore be treated as the nineteenth-century period pieces that they are.

The ordering of the contents was also highly unsatisfactory. Papers on related topics are frequently found in quite different locations, as are sections even of the same document. For instance, the Latin translation of *Seraphic Love* is to be found partly in volume 3 and partly in volume 6 (BP 3, fols. 151–60; BP 6, fols. 246–63), while a further example of an item being dispersed is provided by the ‘Enquirys and Experiments about Electricall Bodys’ of which an incomplete fragment in BP 22, pp. 197–9, was published by M.B. Hall on pages 252–5 of her *Robert Boyle on Natural Philosophy* (1965); though unnoticed by her, the remainder of this text survives as BP 38, fol. 120. That the sorting prior to binding, and the supervision of the binding itself, was rather casually carried out is shown by the commonness of leaves being bound up in the wrong order. The most notorious case of this concerns the tract on the ‘Atomical Philosophy’, partly published by R.S. Westfall in 1956. Westfall mistakenly believed that the item was incomplete and broke off after the first two leaves,

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69 William White (ed.), *The Journals of Walter White* (London, 1898). It should be noted that, while the main contents lists are in White’s hand, the additions in a more florid hand are by a later librarian, Hastings White, while those in a more angular hand, often including folio references, appear to be by a later one still, H.W. Robinson.



whereas in fact the whole of a longer tract survives, bound up in the wrong order.<sup>70</sup> This can easily be paralleled elsewhere in the collection, however, as will be seen by piecemeal references in the catalogue.

Lastly, there is the issue of completeness. It is clear, as with the Boyle Letters, that a significant part of the archive is now lost. On his initial receipt of the papers that had been in Wotton's hands, Miles was apprehensive concerning 'an ill looking hole in the Cover of the box (which seems to have been made by some rat)'.<sup>71</sup> That losses occurred between Wotton's time and Miles' is shown by the fact that Miles sometimes drew attention to items which Wotton's endorsements referred to but which could no longer be found: for instance, 'NB the 1st wanting but Wotton sais an Entire discourse' (BP 36, fol. 146).

In addition, it is clear from the Miles inventories that much interesting material has disappeared since the time when they were made. These inventories are published in full in chapter 2, below, where the evidence they provide is analysed in detail, and it is therefore not necessary to deal with this matter at length here. However it is worth reiterating that a vast amount of material that formed part of the collection in the generation after Boyle's death has since disappeared, including extensive unpublished sections of such key works as *The Usefulness of Natural Philosophy*, or such treatises as Boyle's 'Of the Fuel of the Solar Fire'. There are also interesting items by authors other than Boyle, including Peter Nelson, John Beale and Henry Power, while various documents concerning current affairs are no longer extant. It may be that transcripts of works by others and the like seemed the most dispensable items in the archive, which were therefore disposed of to a disproportionate extent. But, quite apart from the amount that can be learned about a man like Boyle from his ownership of such items, it is unlikely that Miles or anyone else succeeded in a neat act of surgery of peripheral from core material, discarding the former while retaining the latter. Moreover, if easily identifiable items like these are certainly not now present, the implication is that the same is equally true of smaller and less easily distinguishable items. Hence, though a profusion of positive conclusions can be reached from the material in the collection, negative ones should be treated with a degree of circumspection.

It is possible that some of the losses were due to a mistaken belief on Miles' part that anything that had lines drawn through it and was marked 'Tr[anscri]bd' must either already be in print or must survive elsewhere in the archive. His memoranda seem to imply that he saw such material as almost dispensable, asking himself in one, for instance, 'whether Papers said to be transcribd are useless or whether printed' (BP 36, fol. 167). In fact, however, it is clear that many texts so treated survive only in this transitional form, the

70 Now published in full (and correctly ordered) in *Works*, vol. 13, pp. 225–35; see also *ibid.*, pp. xl–xlii.

71 British Library Add. MS 4314, fol. 69.

location to which they were subsequently transferred having since disappeared. This unprepossessing-looking material therefore provides a rich source of evidence concerning the composition of Boyle's writings, which, insofar as Miles did not discard it, is still available in profusion in the archive.

Such losses as were not due to Miles himself are perhaps most likely to have occurred during the period when the papers were in the hands of Miles' widow, though, since no inventory of the papers was made when they reached the Royal Society, it is not impossible that a few might have gone astray thereafter, particularly during the Society's move to premises at Somerset House, which occurred in 1780; it is also said that the archives were 'badly neglected' in the early nineteenth century.<sup>72</sup> What seems fairly clear is that the shape of the collection was 'fixed' in the 1850s when it was bound into its current volumes – though foliation often occurred only later, sometimes not until the 1980s. By definition, nothing has been lost since that point, and only one item appears to have been added to the collection, the last item in BP 41, which has a modern cover sheet and was not noted on the nineteenth-century contents leaf; it had presumably gone astray and was evidently inserted here (the last folio volume in the series) after coming to light at some subsequent date.

## Dating and Handwriting

As with their arrangement, the letters present little problem from the point of view of dating: many are clearly dated, or datable by their contents, and only a handful lack any clues of this kind. Within the series, quite a wide chronological range survives, despite the losses already referred to. Indeed, as will be seen, dated examples of letters from Boyle in this part of the archive provide a valuable clue for assigning dates to material elsewhere in the collection.

Most of the notebooks and other discrete manuscripts are also relatively easy to date, since many seem to have been composed or used at specific times. Apart from the Geneva notebook, dating from 1643, one group comprises the bound volumes of Boyle's writings from the later 1640s, the two versions of his *Aretology* and related items (MSS 192 and 195–7). Of the rest, the bulk date from Boyle's later years, as is clear from internal dates within them. For instance, MS 187 has dates of 1689, 1690 and 1691 (fols. 3, 97v, 141–2); MS 189 of 1689 (fol. 1X); MS 190 of 1684 and succeeding years to 1690; and MS 191 of 1688 (fols. 1–2). In addition, a number of the notebooks – including MSS 185–6, which lack such internal datings – contain draft material for treatises by Boyle which were published in his later years. These include *A Disquisition about the Final Causes of Natural Things* (1688), *Medicina Hydrostatica*

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72 Hall, *All Scientists Now*, p. 71.

(1690), *The Christian Virtuoso* (1690–1), *Experimenta et Observationes Physicae* (1691), *Medicinal Experiments* (1688–94) and *The General History of the Air* (1692). On the other hand, two of the notebooks, MSS 198–9, which are of a distinctive, larger format from the rest, appear to date from earlier in the 1680s, or even from the late 1670s, including material relating to such works as *Experiments and Considerations about the Porosity of Bodies* (1684), *Memoirs for the Natural History of Human Blood* (1684), the discourse concerning ‘the Insalubrity and Salubrity of the Air’ appended to Boyle’s treatise on *Languid and Unheeded Motion* of 1685, and the *Free Enquiry into the Vulgarly Receiv’d Notion of Nature* (1686). Their date is therefore given as c. 1680.

There is thus a disproportionate survival of material of this kind from the later part of Boyle’s life. Though it is possible that this is because earlier, comparable items were discarded, it seems likelier – as we will see in chapter 5 – that Boyle’s compositional practice did indeed change c. 1680, and that the survival of such items from this date onwards reflects this. Earlier, such notebooks as survive are generally devoted to data – experimental results, recipes or weather notes; those that fall into this category are MSS 41, 43, 188, 193 and 194.<sup>73</sup> However, one thing that the earlier and later ones have in common is that they are often partly unused, with blank pages left at the centre (it should be explained that Boyle habitually began the notebooks from both ends, writing in towards the middle until the two halves met).

The part of the archive which offers at once the greatest challenge and the greatest opportunity in terms of dating are the Boyle Papers themselves. Hardly any items in this collection bear any form of date, making the need for some means of imposing chronological distinctions on this great mass of material a pressing one.<sup>74</sup> At the most basic level, a terminus ante quem is sometimes provided by the fact that material to be found here in manuscript form later appeared in print: an example is provided by the various manuscripts of parts of the *Free Enquiry into the Vulgarly Receiv’d Notion of Nature* in the archive, which are discussed in detail in chapter 5, below. However, in a case like this, the fact that manuscript versions must have preceded publication is in itself of relatively little assistance, since in principle the items could have been composed at any earlier date over a period of some thirty years. It is more helpful with treatises published earlier, as with the first volume of *The Usefulness of Experimental Natural Philosophy*, published in 1663, since this means that any surviving manuscript versions of that book must be

73 MSS 193 and 194 have been counted as workdiaries (nos. 17 and 33), as has a related item, evidently comprising a dismembered notebook, which now constitutes BP 44, fols. 43–9 (no. 27): see <<http://www.livesandletters.ac.uk/wd>>. The latter mixes data with fragments of text, and is thus closer than the rest to the later notebooks.

74 It is perhaps worth noting here that, although I initially investigated the possibility that the watermarks to the paper used might provide dating clues, this did not prove a particularly fruitful avenue of enquiry and was therefore not pursued.



of earlier date. This is a particularly useful clue, since a good deal of manuscript material which is clearly related to this part of *Usefulness* does survive; what is more, it is in two quite distinctive hands, one a rounded, the other a more angular italic (see Plate 2). Since it is generally accepted that the bulk of *Usefulness* was composed during the 1650s, these hands almost certainly date from that period; they are therefore referred to below as '1650s' hands. This is not intended to preclude the possibility that the scribes in question may have continued to work for Boyle for longer, perhaps into the early 1660s, but nevertheless we do seem to have here a relatively early stratum in the archive.<sup>75</sup> What is more, it is reasonable to deduce that material in these hands is of much the same date even when it relates to works other than *Usefulness*: hence an important dating clue is here established.

As this illustrates, by far the most important means of dating material in the archive is by careful study of its handwriting, since, once a handwriting can be identified and the period when its author was associated with Boyle established, other examples of the same hand can be presumed to be of a broadly similar date. Yet it is surprising how little attention had been paid to the hands in which material in the archive was written prior to the publication of the original version of this essay in 1992, except for the recognition of the hand of perhaps the commonest of Boyle's amanuenses, Robin Bacon. Indeed, opinions even differed as to which hand was Boyle's own and which were those of his amanuenses, as we shall see. It therefore is necessary here to go into the various handwritings to be found in the archive in some detail, dealing particularly with the different dates from which they derive. A soundly based series of distinctive hands linked to different dates provides a key to unlock the various chronological 'strata' that exist within the collection and hence greatly enhances its value for those interested in the evolution of Boyle's thought.

The material can be divided into two categories, that written by Boyle, and that written by others, particularly by his numerous amanuenses. First, let us deal with the material in the archive written by Boyle himself. From his early years, there is a good deal of material in Boyle's own hand, a distinctive spiky italic, here described as 'early Boyle': for an example, see Plate 1. From some point in the 1650s onwards, however, he almost entirely delegated his writing activity to amanuenses, whom he had previously used only for occasional tasks: this is presumably to be correlated with the serious illness to his eyes that Boyle suffered on his trip to Ireland in 1654.<sup>76</sup> From this point onwards, Boyle's own hand rarely appears in the archive: the exceptions to this are occasional

75 That this is the case is suggested by the occasional juxtaposition of these hands with hand D, datable to the early 1660s, on which see below. A specimen of the first of these hands from British Library Add. MS 32093, fol. 396, is reproduced in T.J. Brown, 'British Scientific Autographs, 2: Robert Boyle (1627–91)', *The Book Collector*, 13 (1964), 487, where it is wrongly taken to be Boyle's own hand.

76 See *Boyle by Himself and his Friends*, pp. xxvii, lxxviii.

memoranda on crucial topics, for instance concerning his will, while it is also much in evidence in the form of alterations and additions to texts written for him by amanuenses. An unusually sustained example of this angular and slightly decrepit hand is to be found in Workdiary 27 (BP 44, fols. 43–9); for further examples see Plates 3, 6 and 13. Otherwise, everything in the archive is in the hand of one or other of the scribes whom Boyle employed. Indeed, there can be few archives with as little material in the hand of their originator as is the case with Boyle's, and it is to the bewildering range of amanuenses' hands that we must now turn. Clearly, it is desirable to establish as much as possible about this group of assistants – identifying them either by name or at least by handwriting, and attempting to establish the period at which they worked for Boyle.

The first amanuensis whose script it is possible to identify is the earliest. The handwriting in question is quite distinctive, a sharply sloping italic which is used for various letters from Boyle in the late 1640s: an example is to be found in BL 1, fol. 103. It also appears in two brief sections of the text of Boyle's *Aretology* (MS 195, fols. 54v–5 and 56v–7), the remainder of which is in Boyle's own early hand, and in BP 7, fol. 290v, a passage written at the end of another early treatise by Boyle. A clue to the identity of its author is provided by the latter, which comprises draft material including a petition by one 'John Jay': there seems no reason to doubt that John Jay was the name of an amanuensis who worked for Boyle in the early part of his Stalbridge period.

Moving to the other end of Boyle's life, we come to a further group of assistants whose handwriting is distinctive and to whom it is possible to give names. The first is the amanuensis whom Boyle used more than any other in his later years, whose name has been familiar since the time of Henry Miles: Robert Bacon, familiarly known by Boyle as 'Robin'.<sup>77</sup> The identity of Bacon is clearly established by a signed note from him to Boyle's friend Sir Robert Southwell, from whom he evidently hoped to obtain similar employment (Plate 14). After transcribing a recipe, dated 23 August 1692, he added the following note, signed from 'Whites ally in Chancery Lane at the Crown': 'Honor'd Sir. I am afraid I shal not light of so constant a friend as the Honorable Esquire Boyle, which I find by Experience[.] let me have what kindnes your Honor think fit, if not – I must wait on Providence, til a further Light.' Accompanying this is a list of thirty-seven titles that Bacon had transcribed for Boyle – in fact, a copy of 'The Order of My Severall Treatises'<sup>78</sup> – to which he added: 'But there are several other Papers of my writing, that is [sic] in the hands of the Perusers. besides some thousand of Receipts, the Titles of them take up some sheets of Papers,' concluding: 'I humbly thank your Honor for your Kindnes to me this day.'<sup>79</sup>

77 For Miles's identification, see British Library Add. MS 4229, fol. 66.

78 See *Works*, vol. 14, p. xli.

79 Royal Society Southwell Papers (MS 248), nos. 8–9.

Bacon's hand recurs frequently both in the notebooks and the Boyle Papers (see Plate 12); it is also found in a number of transcripts and drafts in the Boyle Letters (BL 1, fols. 107–8 and 130–1; BL 6, fols. 53 and 97–8), while a specimen of his hand which can be dated 1685 survives among the Royal Society's Classified Papers 11(1)31. Bacon was obviously working for Boyle at the end of his life, but when his employment by Boyle began is less certain. He was clearly already working for Boyle in the late 1670s, when his hand is used for notes on interviews between Boyle and the entourage of the Imperial ambassador, which are undoubtedly virtually contemporaneous (BP 25, pp. 273–9). Conversely, though items whose date of composition appears to be before c. 1675 are occasionally found in Bacon's hand, these seem to be later copies, and he probably began working for Boyle sometime in the 1670s. It should be pointed out that there are two variants of Bacon's hand. In addition to the neat, rounded script which is most distinctive, there is also a much rougher version, clearly written at haste to dictation, which is particularly in evidence in the notebooks; an example of this is to be found in BP 9, fol. 38.

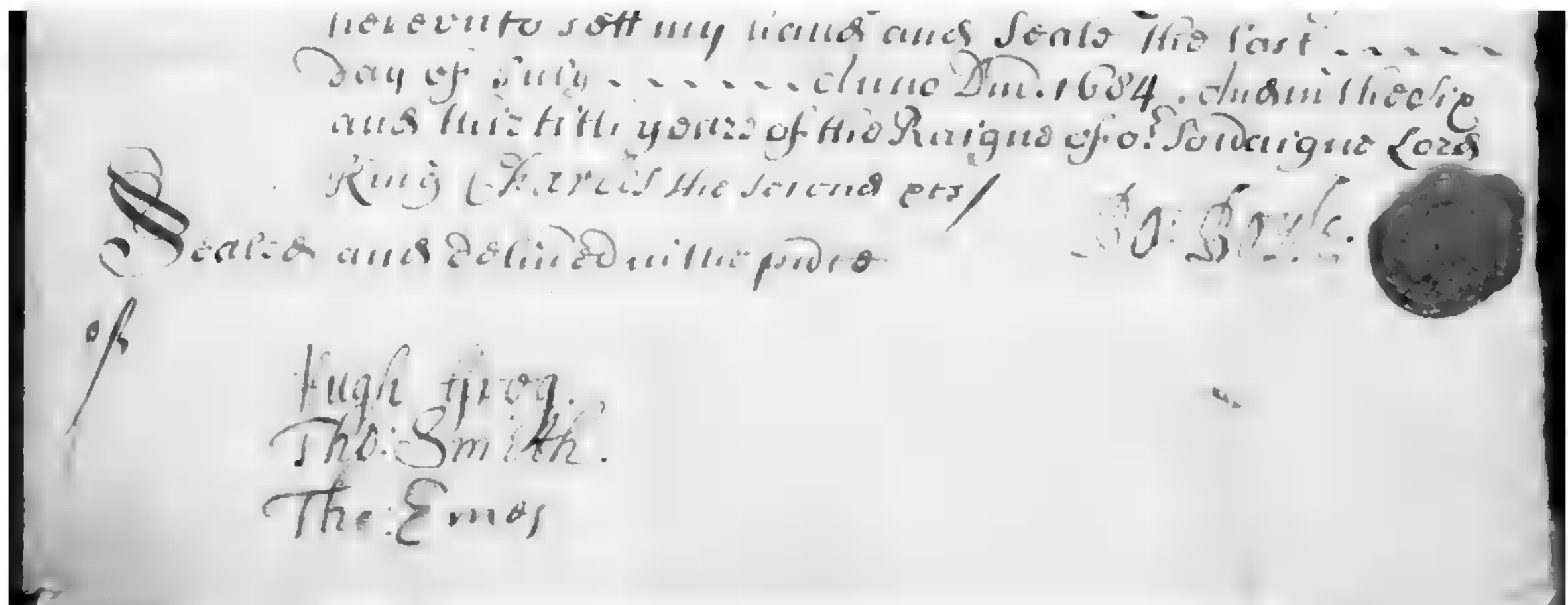
Another amanuensis to whom a name can be given is Hugh Greg, a laboratory assistant and amanuensis whom Boyle mentioned in his will, and who in 1691 published a book called *Curiosities in Chymistry: being New Experiments and Observations Concerning the Principles of Natural Bodies. Written by a Person of Honour, and Published by his Operator, H.G.*<sup>80</sup> Here, the crucial clue to identification is provided by two powers of attorney signed by Boyle on 10 March 1683 and 31 July 1684 respectively, which now survive among the Lismore Papers at Chatsworth House, Derbyshire (MS 33, nos. 110 and 133) (Plate 11 and Fig. 1.1). Both of these were witnessed by Greg along with two other servants of Boyle, and comparison of the signatures with material in the Papers makes it clear that Greg's is the slightly idiosyncratic hand which is frequently found both in the notebooks (Plate 10) and in the Papers, and which also appears in two items in the Boyle Letters – BL 1, fols. 145 and 148.<sup>81</sup> It comes in two varieties, one slightly more formal than the other, but that both are by the same author is confirmed by their juxtaposition in Workdiaries 36 and 37. There are various clues concerning the period when Greg worked for Boyle, besides the Chatsworth document: an item in Greg's hand which Boyle deposited with the Royal Society and which survives as Classified Papers 4(1)48 dates from 1686, while the items in this hand in the Boyle Letters which have already been referred to date respectively from 1682 and 1689. In fact, Greg first seems to have become acquainted with Boyle in 1679, when he was introduced to Boyle by a correspondent from Northern Ireland, James Gordoun.<sup>82</sup>

80 Maddison, *Life*, p. 262.

81 A further clue to identification is the fact that the initials 'H.G.' appear beside a passage in this hand in MS 198, fol. 18.

82 *Correspondence*, vol. 5, pp. 167–8.





**Figure 1.1** Signatures from the Power of Attorney from Robert Boyle to Garrett Roche to administer his Irish landholdings, 31 July 1684. Signed by Boyle and witnessed by Hugh Greg, Thomas Smith and Thomas Emes. Chatsworth House Lismore MS 33, no. 133.

The other signatory to both of the Chatsworth powers of attorney was Thomas Smith, a servant of Boyle's, who, according to Thomas Birch, 'lived seventeen years with Mr Boyle, and was with him at his death'; he, too, was left a bequest by Boyle in his will.<sup>83</sup> We have already seen how Smith, who later practised as an apothecary, became executor to John Warr junior, the servant who became Boyle's executor after his death, on Warr's own death in 1715. Collation of Smith's signature in the Chatsworth documents with material in the archive shows that Smith is responsible for the legible hand, distinct from, and slightly cruder than, that of Bacon, which appears in certain of the notebooks, perhaps particularly MSS 185 and 191, and which is also to be found among the Papers (Plate 13).

Two other signatories appear on the Chatsworth powers of attorney, in each case only once. First, the third of the signatories to the earlier of the two is that of John Warr junior himself. Warr's signature is also to be found in BP 36, fol. 38, while a distinctive specimen of his hand is provided by the catalogue of his books in MS 23, which will be discussed in appendix 2, below, as also in the extensive theological notes in BP 3 and the thesaurus materials in BP 35, both of which may have belonged to Warr and been conflated with Boyle's papers for that reason. For an example of a text written by him, see Plate 7. It is clear that Boyle used Warr extensively in his later years, both for general clerical work and for correspondence, and Warr's hand recurs frequently in the Boyle Papers and Letters: an example is to be found in BL 1, fols. 105–6, while Warr also wrote letters which, signed by Boyle, were actually sent out and which survive in the collections of their recipients. An example is the series of letters

<sup>83</sup> Birch (ed.), *Boyle*, vol. 1, p. ii; Maddison, *Life*, p. 260.

from Boyle to Narcissus Marsh, which appeared at Christie's, London, in 1989 and 1991.<sup>84</sup> Warr probably started working for Boyle in the 1670s; the earliest example of what is apparently his work in the Boyle Letters dates from 1673 (BL 6, fol. 38). Warr's hand varies in form from quite a neat italic to a rough running hand, probably written at speed to dictation: a typical example of this will be found in BL 1, fols. 139–40; one distinctive feature linking both types is the crooked form that Warr used for a capital 'V'.

Here, 'Warr' may be taken to mean the John Warr whose employment by Boyle up to the time of his death was crowned by his executorship. In addition, however, it should be noted here that the hand of another John Warr also appears in the archive, that of his father: this is consistently hereinafter referred to as 'Warr sen.' to differentiate it from the hand of his son. While the younger man's relationship with Boyle is clear, that of his father is slightly less so; he perhaps came into contact with Boyle through his son.<sup>85</sup> Be that as it may, there can be no question of the identity of his handwriting, which is clinched by the fact that the manuscript of a book which was said when published to have been written by 'J.W.' and which is identified as being by him in the Warr library catalogue,<sup>86</sup> a translation of Otto Tachenius' *Hippocrates Chymicus* and his *Clavis* (London, 1677), survives as BP 32. Further examples of this hand comprise Latin translations of books defending Edward Stillingfleet against Roman Catholic attacks (BP 6, fols. 78ff.) and other complete texts, including the manuscript of a further unpublished book of Warr's own in addition to the Tachenius translation (BP 45); there is also what is evidently a dismembered notebook of Warr's in BP 42, fols. 183–213. It should be noted that some or all of these items may have no connection with Boyle; they could be present in the archive because they were among the papers of the younger Warr at the time of his death and were mistakenly included with Boyle's when these were transferred via Thomas Smith to Henry Miles.

Returning to the Chatworth powers of attorney, one last signatory remains to be noted, the third to the second power of attorney. This is Thomas Emes, and comparison with material in the Boyle archive reveals that his slightly jagged handwriting is in evidence in material compiled c. 1680, for instance MS 199, fols. 96ff. Thomas Emes later became notorious as a member of the 'French Prophets', whose resurrection was foretold after his death in 1707 but failed to materialise.<sup>87</sup> Previously, in 1698–1700, he had been involved in a controversy over the medical effects of acids and alkalis, in the course of which he mentioned Boyle, writing: 'the truth of whose Narratives, in matters of Fact, known to him, are beyond question, to any that knew him, as I not only well did, but was either an Assistant, or Beholder in the making

84 See *Correspondence*, vol. 1, p. xxiv.

85 For a letter from him to Boyle, see *Correspondence*, vol. 5, pp. 136–7.

86 See Harwood, *Essays and Ethics*, p. 249. See further appendix 2.

87 See Hillel Schwartz, *The French Prophets* (Berkeley and Los Angeles, 1980), esp. ch. 4.

those Experiments, that are the substance of that Useful Book of *Humane Blood*.<sup>88</sup>

Another identifiable hand is that of one of Boyle's laboratory assistants who went on to become an active natural philosopher in his own right, Frederic Slare.<sup>89</sup> Elected Fellow of the Royal Society in 1680, Slare thereafter made a number of presentations of experimental findings, the holograph texts of which survive among the Society's Classified Papers. A collation of these items with material in the Boyle Papers makes it clear that Slare's hand appears frequently in the latter collection (see Plate 7). As with the younger Warr, there are two characteristic varieties of Slare's handwriting. One is a fairly spiky italic, seen in Classified Papers 11(1)22–6 and 30; the other is more of a running hand, seen in Classified Papers 11(1)29, 32–5 and 39. Both are frequently encountered in the Papers, perhaps particularly in connection with experimental notes, though also for more general material. In addition, much of MS 188 is in Slare's hand. This is one of the somewhat earlier items which survives among the notebooks, in this case dating from the early to mid 1670s, and it appears to have been in this decade that Slare worked for Boyle.

Another figure whose characteristic handwriting is to be found among the Boyle Papers, providing copies of papers by other scientists and, sometimes, Latin translations of Boyle's works, is Henry Oldenburg, Secretary of the Royal Society; Oldenburg's hand is also to be found in the Boyle Letters, for example BL 3, fols. 129–32. Oldenburg died in 1677, and this provides a useful dating clue, since by definition no manuscripts written or endorsed by Oldenburg can be later than that date.

Other Latin translations of Boyle's works are in the hand of another identifiable figure, Thomas Ramsay, as is confirmed by an endorsement to one of them, evidently in Boyle's hand: 'Final Causes. Translated by Mr Ramsey' (BP 24, p. 558). Ramsay's hand is also found in letters from him in BL 5, fols. 1–8, while in 1686 he signed a paper in which he identified himself as 'a Lithuanian', thanking Boyle for his patronage and discharging him from debts 'from the beginning of the world to the date hereof' (BP 41, fol. 123). Ramsay probably began to work for Boyle in the mid 1680s, evidently continuing to work for him for the rest of his life: the latest work that he translated was *Experimenta et Observationes Physicae*, published in 1691.<sup>90</sup>

88 Thomas Emes, *A Dialogue between Alkali and Acid* (London, 1698), pp. 65–6. Emes shows his indebtedness to Boyle in the agenda and terminology that he deploys elsewhere in this work. On the controversy, see also Schwartz, *French Prophets*, p. 250; H.J. Cook, 'Sir John Colbatch and Augustan Medicine', *Annals of Science*, 47 (1990), 475–505, esp. p. 496. It is perhaps worth noting here that the identification of Emes' handwriting is a new one, which did not appear in the 1992 version of this essay. Emes' hand is identified as 'hand Z' in L.M. Principe, *The Aspiring Adept* (Princeton, 1998), p. 233n. and passim.

89 See M.B. Hall, 'Frederick Slare, F.R.S.', *NRRS*, 46 (1992), 23–41.

90 See Principe, *Aspiring Adept*, p. 228 and n. It should be noted here that, in the original version of this essay, it was suggested that Ramsay started to work for Boyle prior to



Smaller groups of material in the handwriting of identifiable individuals include material by Frederick Clodius, Samuel Hartlib's son-in-law and an early contact of Boyle's (for example, BP 34, pp. 238ff.);<sup>91</sup> colleagues like the mathematician, John Wallis (for example, BP 41, fols. 22ff.); the virtuosi, John Beale and John Evelyn (for example, BP 19, fols. 36ff.; BP 26, fol. 141); Boyle's one-time employee, Robert Hooke (BP 10, fol. 116); and a variety of others, whose names are given in full at the appropriate point in the catalogue. It is highly likely that examples of handwriting which have not been identified also fall into this category and that definite attributions will be able to be made in due course.

We then move on to handwritings which are distinctive, but to the authors of which it is unfortunately currently impossible to give a name; these are therefore denoted by letters of the alphabet. It is to be hoped that subsequent research will rescue at least some of these worthy figures from anonymity, since they arguably have as much claim to our attention as the indispensable but shadowy laboratory assistants to whom Steven Shapin has drawn attention in *A Social History of Truth*.<sup>92</sup> However, although these scripts cannot be attributed to a named individual, they can often be dated, and hence important and hitherto neglected evidence is available as to the period at which material was composed. In particular, the great desideratum is to identify hands dating from the intermediate period between the later part of Boyle's life, from which the bulk of hands listed so far emanate, and Boyle's early years, when, despite employing John Jay, Boyle seems to have written a high proportion of his manuscripts himself. This matter therefore deserves careful scrutiny.

We may start with three amanuenses who were apparently employed by Boyle c. 1680, and who figure prominently in the material considered in chapter 5 below. One was responsible for various passages in the Papers and notebooks, including a few passages in MSS 198–9, which, as already noted, appear to date from c. 1680. A further clue to the date at which the amanuensis in question was being employed by Boyle is provided by the fact that, among the items in this hand found in the Papers is an account of an interview with Lord Tarbat, dated 3 October 1678, BP 39, fols. 216–17.<sup>93</sup> This is identified in the catalogue below as hand A (see Plate 6). Secondly, there is an amanuensis who wrote a letter on Boyle's behalf dating from October 1679 which is now

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Oldenburg's death in 1677, on the grounds that one translation apparently by him was heavily endorsed in Oldenburg's hand: BP 25, pp. 19ff. However, in fact this translation appears to be in a different, unidentified hand.

91 It should be pointed out that the identification of this handwriting as that of Clodius is based on the identification of the item in question as being in Clodius' hand by William Wotton on p. 325.

92 S. Shapin, *A Social History of Truth* (Chicago, 1994), ch. 8. See also his earlier 'The Invisible Technician', *American Scientist*, 77 (1989), 554–63.

93 Published in Michael Hunter (ed.), *The Occult Laboratory: Magic, Science and Second Sight in Late Seventeenth-century Scotland* (Woodbridge, 2001), pp. 51–3.

BL 1, fols. 152–3. The same hand appears quite frequently in the Boyle Papers and will hereafter be referred to as hand B (see Plate 8). Its dating is confirmed by the fact that it is found adjacent to material in Greg's hand in BP 28, p. 113. Thirdly, there is another distinctive hand which appears quite widely in the archive, again disproportionately in documents dating from the years around 1680, going into the 1680s. For dated examples, see BL 1, fols. 112–15, a letter from Boyle to Bishop Henry Jones dated 27 September 1681, or Classified Papers 11(1)21, dated 30 September 1680; see also BP 21, pp. 227–8, 246, 253–4 and 257 (ranging from 1683 onwards). This is called hand C (see Plate 9).<sup>94</sup>

Further important clues are provided by a group of items associated with Boyle now to be found in the Royal Society's Early Letters, EL B.1. These comprise (1) a series of letters from Boyle to Oldenburg, all dating from the early 1660s (B.1.82–101) (after 1665, the sequence of letters from Boyle ceases, presumably because they were returned to him: why these ones escaped is unclear)<sup>95</sup> and (2), preceding these, a series of leaves endorsed 'Imperfect Papers of Mr Boyle' (B.1.80). The latter may be disposed of first: a definite terminus ante quem for the papers is provided by the fact that their versos have been reused by Oldenburg for notes on a French book published in 1677, while the bulk of this material is datable by its content, which shows that it derives from the early to mid 1670s. Fols. 168–71 form part of the text of Boyle's 'Superficial Figures of Fluids' published in *Philosophical Transactions* in 1677.<sup>96</sup> The text of fols. 172–3 is to be found in printed form in Boyle's 'Hydrostatical Discourse', the response that he published in 1672 to Henry More's *Enchiridion Metaphysicum*, which was itself published in 1671 after having been completed in 1670. This therefore provides a tight delimitation for the possible date at which the manuscript could have been written.<sup>97</sup> Fols. 172–3 are in an angular hand which appears so occasionally in the Papers that it has not seemed worth giving it a separate identification, as with other hands which occur only very infrequently.<sup>98</sup> Fols. 168–71, on the other hand, are in the running hand of Slare, who we have already seen was working for Boyle in the 1670s.

94 In the original version of this essay (and the catalogue that accompanied it), this hand was confused with Boyle's own hand. However, this mistake became apparent soon after the catalogue was issued; for its correction, see Principe, *Aspiring Adept*, p. 225n., and *Works*, vol. 1, p. ci and note.

95 See Maddison, 'Summary', pp. 100–1. For Boyle having letters to Oldenburg in his possession at the end of his life, see above, p. 31.

96 *Phil. Trans.*, 11 (1677), 804–7; *Works*, vol. 8, pp. 581–4.

97 *Works*, vol. 7, pp. 139–84.; cf. Steven Shapin and Simon Schaffer, *Leviathan and the Air-pump* (Princeton, 1985), p. 214. I am indebted to Ted Davis for help in identifying this material.

98 For an example see BP 10, fol. 4. In the original guide, this hand was denominated 'C'. See above, n. 94.

The last of these items, B.1.80- (fol. 174) is a single 'Experiment' which has not been traced in any of Boyle's published works and whose date is therefore unclear. It is written in an italic hand which is paralleled in the main series of Boyle items in EL B 1, the letters to Oldenburg already referred to. Two of these, nos. 81 and 83, dated respectively 29 October 1663 and 14 June 1665, are in the same italic; hence this appears to be the hand of an amanuensis whom Boyle employed at about that time. Though the hand was thought by Henry Miles to be Boyle's own (BP 3, fol. 109), this is not possible, since letters in this hand have sometimes been corrected in another hand which is certainly Boyle's (for example, EL B.1.81v). (It should be added that, since these letters must have been received by Oldenburg soon after they were written and then retained at the Royal Society ever since, it is not possible to suggest that we have examples of Boyle's handwriting of two different dates.) This hand has been identified below as D; it is also to be found in the Boyle Papers, and that it dates from the 1660s is confirmed by the fact that a section in it, BP 18, fols. 127-8, is dated 1662.<sup>99</sup>

More significant still is the principal hand represented in these letters, EL B.1.82 and EL B.1.84-101, letters dating from 30[?] October 1664 and from 20 June to 23 December 1665. This is a distinctive hand, which is frequently found among the Boyle Papers; that the amanuensis responsible for it was employed by Boyle in the 1660s is confirmed by the fact that material in it occasionally contains dates from that decade (for example, BP 30, pp. 507ff), while BP 19, fol. 184, the title of which is in this hand, was endorsed by Oldenburg as received by him on 28 February 1668. The same hand is also found in the Boyle Letters in drafts and copies dating from the 1660s (BL 1, fols. 126-7 and 154); further examples are to be found in Classified Papers 4(1)15, 20 (dated 1666-7) and 17, 9 (dated 1668). Though this hand has sometimes been identified as Boyle's own,<sup>100</sup> this is clearly mistaken, since some of the letters in EL B 1 which are in this hand have been corrected by Boyle. This hand is hereafter identified as hand E (see Plates 4, 6).

A further distinctive hand found in both the Boyle Letters and the Boyle Papers and which clearly dates from the 1660s has here been called hand F (see Plate 3). A good example of this is provided by Boyle's copy of the letter that he wrote in 1666 to Henry Stubbe concerning Valentine Greatrakes, the Irish 'stroker', and the questionnaire that he drew up concerning Greatrakes' activities (BL 3, fols. 23ff.). There can be no doubt that these items date from the period to which they refer rather than being later copies; a further clue is provided by the fact that BP 8, fol. 1, another item in this hand, must date from

99 See also BL 1, fols. 158-9 (1662); Classified Papers 15(1)9 (1663); 17, 9 (1668).

100 Maddison, *Life*, plate 17, where it is described as Boyle's 'mature letter-hand.' See also M.B. Hall in *NRRS*, 41 (1987), 113 (in fact, the item in question is corrected in pencil by Boyle, thus again confirming the attribution given here).



before 25 April 1666, when Oldenburg endorsed it. Hand F is also often found interspersed with hand E, as in BP 8, fol. 84 (where both are dated 1665); BP 10, fols. 103v–4; BP 23, pp. 557ff.; BP 25, pp. 392–3; BP 26, fols. 193–4; and BP 27, pp. 6ff. Again, we seem to have a hand of an employee of Boyle's middle years.

Certain other hands may be identified as dating from the same period as hands E and F because of their juxtaposition with them and/or because of the appearance in documents written in them of dates of this period. One such hand is a slightly angular italic, here described as hand G. This is interspersed with hand E in BP 17, fols. 165–7, BP 27, pp. 29–30, and BP 38, fols. 95–6 (see Plate 6). A further hand which belongs to this group is here called hand H: for an example, see BP 10, fols. 80v–1. This is contemporary with hand E in BP 20, pp. 392–3, while in BP 22, pp. 33ff., it is dated to the early 1660s. Thirdly, there is a very spiky italic, here called hand J: for an example, see BP 8, fol. 172. In BP 19, fol. 184, and BP 27, pp. 19–22, this is juxtaposed with hand E, and in both cases there are dating clues; the latter refers to dates in the early 1660s, while the former is the document endorsed by Oldenburg as being received in 1668 that has already been referred to. Fourthly, we have hand K, a very distinctive small, rather square hand: for an example see Plate 5. This is interspersed with hand J in BP 27, pp. 19–22 and 363, and it is juxtaposed with hand E in BP 28, p. 335, and with both hand E and hand J in BP 19, fol. 184.

As already noted, all the hands described in the previous paragraphs appear to date from the 1660s. Though the date at which Boyle ceased to use the amanuenses responsible for them is unclear, it may be significant that almost all the dated specimens of their work date from c. 1659 to c. 1670: it seems quite likely that these were scribes who worked for him while he was living in Oxford, a possible terminal point for the activities of at least some of them being provided by Boyle's move to London in 1668.

In Boyle's later years, his amanuenses can mostly be identified by name, as we have already seen, and therefore the need for alphabetical labels is reduced. However, two distinctive hands are used in various of the profuse Latin translations of Boyle's works in the archive. The translations in these hands are predominantly of works dating from the 1670s and 1680s, though some of the writings involved were published as late as 1690–1, while some are earlier, the earliest (in the case of hand L) being *Seraphic Love* (1659). It seems likely that the translators in question were predominantly working for Boyle in the last decade of his life. The hands in question are here described as hands L and M; examples of them may be seen respectively in the first items of BP 11 and BP 6. Though hand L remains wholly unidentified, it seems quite possible that hand M is that of Boyle's protégé, the Scottish physician David Abercromby (though this is not so certain as to render it appropriate systematically to substitute 'Abercromby' for 'M' in the catalogue). That this hand may be Abercromby's is suggested by the fact that the corrected version of the Latin

verses to Boyle by ‘S.F., an English noblewoman’ that appear in the Latin edition of *Notion of Nature* are written in it, BP 41, fols. 68–9: the title to the published version of the verses suggests that Abercromby was their translator.<sup>101</sup> In addition, hand M was responsible for translating parts of *Experimenta et Observationes Physicae* into Latin (BP 9, fols. 181–2; BP 25, fols. 95ff.), and a memorandum by Boyle shows that ‘Dr Ab’ was responsible for a translation of this work (BP 36, fol. 55).

Lastly, letters of the alphabet have been used to identify a residue of miscellaneous hands. One is a hand which is similar to Bacon’s hand but which, after much deliberation, I have decided is more likely to be the hand of a separate scribe than a further variant of his: certain Latin translations appear in this hand, while it is also used for the material transcribed from the Royal Society Register Books in BP 20. This hand is here referred to as hand N: an example is to be found in BP 11, fols. 24ff. There are also certain distinctive hands that have been recognised since the alphabetical scheme divulged in the original version of this essay was formulated, which have therefore required identifications using letters not already deployed. In particular, three further hands have been recognised in the course of work on Boyle’s workdiaries: hand P, an amanuensis responsible for various of these texts dating from c. 1655–7 (nos. 13–16); and hands Q and R, both of which appear in workdiaries of the late 1660s (nos. 21–3).

Various caveats are in order about such identifications. For one thing, though all the hands noted here are ones which are distinctive enough to be identified with some confidence, and which, furthermore, appear frequently enough to make a global identification appropriate, there are others which appear more fleetingly, apparently representing the work of amanuenses employed more briefly at different points in Boyle’s life. Confident identifications of hands that fall into this category are much more problematic, and have been generally avoided here. Moreover, there are grey areas even to the identifications that have been made. Some of these have already been referred to, as with the hand similar to Bacon’s but distinct from it that was described in the last paragraph. Where I am less than normally certain of an identification in the catalogue appended to this book, I have inserted a query, and, though this may appear pedantic, I hope that it will enhance readers’ confidence in the identifications which lack such qualification.

Subject to such provisos, however, it is important to stress what an important tool for understanding Boyle such dating evidence from handwriting provides: this had been completely unexploited prior to the publication of the original version of this essay in 1992. Indeed, it would not be going too far to assert that the analysis offered there and now reprinted represented a crucial breakthrough in the interpretation of the material in the

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101 See *Works*, vol. 10, pp. lv–lvi, 577–81.

archive, making it possible to identify different ‘strata’ in it, and giving clues to the stages of Boyle’s composition of texts often virtually for the first time. This may be clearly illustrated by reference to the new edition of *The Works of Robert Boyle*. During the preparatory work for that, special attention was paid to all material in handwritings that could be dated to the 1640s and the 1650s, with the result that a virtual clean sweep has been made of texts dating from those formative periods in Boyle’s career. All texts in his early hand have now been published, and all documents in 1650s hands have been scrutinised, identified and exploited as appropriate: some have turned out to be manuscript versions of works that were subsequently published, particularly *The Usefulness of Natural Philosophy*; others turned out to be unpublished and hitherto unknown sections of that work, which were therefore included in volume 13 of the edition; while others proved to be fragments of works by Boyle otherwise considered irrevocably lost, such as his essay on spontaneous generation and his dialogues on heat and flame, which have also now been published.<sup>102</sup> Then, the fact that manuscripts are in handwritings of the 1660s similarly frequently proves that works were in composition at that point: this can be crucial in such cases as that of *Notion of Nature*, as studied in chapter 5, below. A similar instance relates to the sets of ‘heads’ and ‘inquiries’ that Boyle compiled: that these disproportionately survive in handwritings of the 1660s seems crucial as evidence of the stage in his career when Boyle was chiefly active in compiling documents of this kind.<sup>103</sup> Of course, others are in later hands, and it is clear that Boyle often had earlier texts recopied in the hands of amanuenses whom he employed in his later years, most notably Robin Bacon: hence the fact that a document is in a later hand is less conclusive than if it were in an earlier one. Nevertheless, such evidence often provides a crucial *terminus ante quem* in terms of the composition of documents in the archive, and in this respect it has revolutionised our understanding of Boyle as an author.

## Content

### *The Boyle Letters*

At the outset, it is worth making a crucial distinction. On the one hand, the Boyle archive is significant – like any other archive – as the *fonds* from which printed editions are derived, containing the actual documents from which the published texts are taken. On the other hand, however, the archive – like others

102 See *Works*, vol. 13, *passim*, inc. p. xvn. for a list of the tiny fragments left over after this exercise had been completed.

103 See Michael Hunter, ‘Robert Boyle and the Early Royal Society: A Reciprocal Exchange in the Making of Baconian Science’, *British Journal for the History of Science* (in press). See also Hunter, *Heads & Inquiries*, p. vii and *passim*.



—is important for the extent to which it contains hitherto unexamined material, which therefore still awaits exploitation in order for its significance to be assessed. In terms of the Boyle Papers and Letters, it could be argued that the balance between these two criteria has shifted as a result of the intensive editorial activity that has occurred in the last decade and a half. Its significance has thus undoubtedly risen according to the first criterion, and as a result it may have dwindled according to the second. On the other hand, as will become apparent in this section, even now there is a perhaps surprising amount of material relating either to Boyle or to authors other than him that demands attention.

As far as correspondence is concerned, the archive of an individual is by definition likelier to contain letters that he received than ones that he sent, and such items make up the bulk of the Boyle Letters. The result is that one of the strengths of the archive is its lengthy series of incoming letters to Boyle from a wide range of correspondents, both at home and abroad, dating from the 1640s to the time of his death. Figures represented include churchmen like Bishops Thomas Barlow and Gilbert Burnet, fellow natural philosophers like John Beale and Robert Sharrock, Oxford scholars like Edward Bernard and Thomas Hyde, and eminent figures in the colonies like John Eliot. There are also interesting groups of letters dealing with such topics as the project for translating the Bible into Irish with which Boyle was associated. All of these are published in full in *The Correspondence of Robert Boyle*.

On the other hand, the collection is not devoid of letters written by Boyle himself, which survive here for various reasons. Some are letters to members of his family like Lady Ranelagh, which presumably came back into his hands at her death, if not before. Others are retained drafts, and this should be borne in mind in interpreting them, since the version that was actually sent may have differed from that retained. A case in point is provided by the partial draft of a letter from Boyle to Edward Bernard which survives as BL 1, fols. 149–50, since the version of the letter that was actually sent survives among the Smith manuscripts in the Bodleian Library, Oxford. Not only does this have an opening section missing from the draft; there are also various minor differences between the two which are recorded in the edition of this letter in *The Correspondence*.<sup>104</sup>

Many of the above letters were published by Thomas Birch in the eighteenth century, but the new edition has superseded that one — in part, by publishing individual letters from this collection which Birch unaccountably omitted from series that he mainly published in full: for instance, the letter from Barlow that he ignored (see above), which is one of the most interesting of Barlow's letters to Boyle. There are also entire series that he omitted, such as Boyle's correspondence with the physician and natural philosopher Daniel Coker in the

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104 *Correspondence*, vol. 5, pp. 168–70, 444–5.

1660s. A type of letter very much neglected by Miles and Birch were those sent from abroad, from correspondents like Henri Justel and Guy Mesmin, while another class of letters that they arguably neglected to a disproportionate extent are those from lesser figures – alchemists and others at home and abroad, which are crucial in adding texture to our view of intellectual life in the period. All of this is now fully set out in the new edition of Boyle's *Correspondence*, and, though all appropriate sources elsewhere have also been exploited, particularly for letters from Boyle rather than to him, the Boyle Letters are nevertheless to a disproportionate extent the manuscript *fonds* on which the published corpus is based.

On the other hand, it is worth noting the extent to which the collection contains more miscellaneous items, neither addressed to nor written by Boyle, which presumably came into Boyle's possession because he was interested in their content, and which are merely summarised rather than published in full in the *Correspondence*. This particularly applies to BL 7, which Henry Miles consciously put together out of such materials; this has a number of items linked to the Hartlib Circle and the Royal Society. Some letters in earlier volumes fall into the same category, however, including even one diplomatic missive of 1690, Boyle's reasons for keeping which are unclear.<sup>105</sup> Transcripts of various Hartlib Circle letters, mainly in BP 7, were included in the second edition of the CD-ROM of the Hartlib Papers, published in 2002, but the other letters await proper attention which it is hoped that they will receive in due course.

### *The Manuscripts and Notebooks*

As already noted, these fall into two categories. The earlier items comprise treatises by Boyle, the most important of which were published in John Harwood's *The Early Essays and Ethics of Robert Boyle* (1991), a milestone in the study of Boyle's formative years, complemented by certain additional items published in volume 13 of *The Works of Robert Boyle* in 2000. On the other hand, it is worth pointing out that even Harwood's edition can be supplemented by the manuscripts, in that he naturally printed the final version of the text of Boyle's *Aretology or Ethicall Elements* (MS 195, fols. 52–231), whereas researchers will have to turn to the archive for the earlier versions of this, to be found in MS 192 and MS 195, fols. 12–45. Moreover, the earliest item of all, Boyle's Geneva notebook, though briefly described by Lawrence M. Principe in the seminal article in which he first drew attention to it, cries out for a proper study.

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105 BL 3, fols. 35–6: William III to the Estates General of the United Provinces, 24 July 1690. This version is in French, and the original of it has not been traced, but for an identical Dutch version see *Hollandse Mercurius, Verhalende de Voornaemste Saken van Staet, en Andere Voorvallen, die in en Omtrent de Vereenigde Nederlanden, en Elders in Europa, in het Jaer 1690 Het Act-en-Veertigste Deel* (Haarlem, 1691), pp. 231–2. I am indebted to Graham Gibbs for this reference.

Indeed, it might even merit a complete edition, in view of its significance in documenting a period in Boyle's life – his second Geneva stay – that is otherwise hardly documented.

Much of the remainder of the series comprises notebooks, and these seem to have served two functions for Boyle. In part, he used them as a repository for memoranda and factual records, particularly experimental findings, observations, weather notes and the like, together with lists of experiments that he intended to carry out. But, in addition, he (or, more commonly, his amanuenses) wrote down in them drafts for parts of treatises which he was composing at the time when the notebook in question was in use. A good deal of the material in them is scored through with diagonal lines and marked 'Tbd.', evidently because it was reused elsewhere, though this revised version often does not survive (it was presumably for the same reason that some leaves have actually been torn out). These items therefore provide particularly telling information about Boyle's treatises in the process of formation, and, insofar as they relate to published works by Boyle, they have been extensively referred to in the tables of manuscripts relating to each of Boyle's books that form part of the introductory material to *The Works of Robert Boyle*.

### *The Boyle Papers*

Turning to the Boyle Papers, their content is so varied that it almost defies description. Much of it represents Boyle's personal archive, in the form of treatises or sections of treatises; drafts; records of experiments; notes on books; and personal memoranda. Mixed in with this are such items as Latin translations of Boyle's works and more miscellaneous material – copies of treatises that interested him on medicine, alchemy, theology and travel; religious and political texts relating to the issues of the day; and even poetical effusions. There is also an admixture of material which may have had no connection with Boyle, having come into the collection during its subsequent history, including items associated with Henry Miles and perhaps also with John Warr senior and junior, though such items are relatively unusual.

Let us start with Boyle's own papers which, as already indicated, fall into a number of categories. First, it is perhaps appropriate to mention records and documents relating to Boyle's life. The most significant of these is the autobiographical 'Account of Philaretus' in BP 37, which was originally published in 1744 by Birch and then re-edited first by R.E.W. Maddison in 1969 and later by me – accordingly to slightly different principles – in 1994.<sup>106</sup> An example of the kind of highly revealing material to be found in the archive is provided by the notes that Boyle kept on the confessional interviews that he had with two leading churchmen, Gilbert Burnet, Bishop of Salisbury, and

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<sup>106</sup> Maddison, *Life*, pp. 2–45; *Boyle by Himself and his Friends*, pp. 1–22.



Edward Stillingfleet, Bishop of Worcester, in July 1691; these survive as BP 3, fols. 137–41, which I published with a commentary in the *Journal of Ecclesiastical History* in 1993.<sup>107</sup>

Moving to Boyle's intellectual activities, perhaps the most exciting items are the wholly unpublished works which survive either complete or in part in the archive, and which have now mostly been published. A lead in editing such material was taken by Thomas Birch and Henry Miles in their 1744 edition, where, as we have seen, material was included from the unpublished sections of *The Christian Virtuoso*, while since the 1950s various items of this kind have been put into print, including the material on miracles published by Rosalie Colie and the text concerning occult qualities from BP 22 published in 1987 by M.B. Hall, which have already been referred to. Since then, such publication has accelerated. In 1989 Malcolm Oster published an early essay by Boyle on the ethics of the treatment of animals (a related text had earlier been published by Yvette Conry); John Harwood's 1991 volume of Boyle's early writings includes moral essays and religious meditations from the Boyle Papers as well as the material from among the individually bound manuscript volumes that has already been referred to; Lawrence Principe's *The Aspiring Adept* (1998) includes not only a reconstruction of Boyle's 'Dialogue on the Transmutation and Melioration of Metals' from a number of more or less substantial fragments which survive in the archive, but also various ancillary texts; while Jack MacIntosh's *Boyle on Atheism* makes similar inroads on the often fragmentary hitherto unpublished materials relating to the defence of Christianity which are to be found in the archive.<sup>108</sup>

Perhaps the most substantial corpus of material of this kind is to be found in volumes 13 and 14 of *The Works of Robert Boyle*, virtually all of it derived from the Boyle Papers. This includes extensive materials dating from the 1640s and 1650s, including Boyle's moral epistles and religious meditations; it presents the writings from his early scientific phase, notably 'Of the Study of the Book of Nature', 'the 'Essay of the Holy Scriptures' and 'Of the Atomical Philosophy'; it also includes the fragments from writings of the late 1650s, including discarded sections of *Usefulness*, that have already been referred to. Thereafter, it includes later writings on a variety of themes: papers on petrification and mineralogy; material relating to the mechanical origin of qualities and miscellaneous scientific papers; papers relating to *Notion of Nature* and *Final Causes*; theological papers, including dialogues on the limitations of human reason and theological papers; and later medical writings. In some cases, these are based on Latin translations of works or parts of works which are otherwise lost. In addition, volume 14 also includes a complete text of the lists of his unpublished writings that Boyle had compiled at different stages in his life, noted earlier as a key source for his intellectual evolution.

107 Subsequently reprinted in Hunter, *Scruples and Science*, pp. 72–92.

108 These are tabulated in the catalogue below. See also the table in *Works*, vol. 14, pp. 359–65.

The Boyle Papers also contain significant quantities of material relating to works by Boyle that were published, and this falls into various categories. One is of sections of text which survive in manuscript form almost exactly as they were published: in the case of Boyle's *Some Considerations about the Reconcilableness of Reason and Religion*, these enabled M.A. Stewart to confirm Boyle's authorship of that work, which some (including J.F. Fulton) had doubted, and in fact there is hardly a single work from Boyle's later years of which at least some material does not survive in the archive; this was an argument that Edward B. Davis was able to adduce in proving that Boyle did not write *Reasons why a Protestant should not Turn Papist*, no manuscript material for which survives.<sup>109</sup> In addition, we often have manuscript material illustrating the stages that a book went through before it appeared in print; such material is tabulated and, where appropriate, published in the *Works*. Perhaps the best example of this is the material relating to Boyle's *Free Enquiry into the Vulgarly Receiv'd Notion of Nature* which I have analysed with Edward B. Davis (see below, chapter 5). Edward B. Davis has also published an analysis of a significant document in the archive which turns out to include Robert Hooke's comments on a draft of Boyle's *Disquisition about the Final Causes of Natural Things*, a crucial item which throws light on the relationship between these two great natural philosophers as well as on the making of Boyle's book.<sup>110</sup> Thirdly, there is material that Boyle collected because it was germane to a book which he had already published, evidently with a view to publishing an addendum to it: this is a little-explored part of the collection, though Harriet Knight and I have recently completed a study of the material relating to the planned second edition of *Human Blood*, which failed to materialise.<sup>111</sup>

One major component of the archive comprises Latin translations of writings by Boyle. Though a few of these are duplicate Latin translations of Boyle's works which were published in Oxford or London during his lifetime, presumably under his supervision, others are of works of which no Latin translation was ever published, as with *Languid and Unheeded Motion* (1685) or *The Christian Virtuoso* (1690–1), or which appeared in Latin versions only in the edition of Boyle published by Samuel Tournes in Geneva, such as *The Producibleness of Chemical Principles* (1680). *A Catalogue of the Philosophical Books and Tracts Written by the Honourable Robert Boyle* which the publisher Edward Jones put out in 1689 explained that those of Boyle's works available in Latin editions were marked, adding: 'Several of the rest having likewise been

109 Davis, 'The Anonymous Works of Robert Boyle and the *Reasons why a Protestant should not Turn Papist*', *Journal of the History of Ideas*, 55 (1994), 611–29, on p. 622. For Stewart's article, see above, n. 43.

110 Davis, 'Parcere nominibus', in Hunter (ed.), *Robert Boyle Reconsidered* (Cambridge, 1994), pp. 157–75.

111 See Harriet Knight and Michael Hunter, 'Robert Boyle's *Memoirs for the Natural History of Human Blood* (1684): Print, Manuscript and the Impact of Baconianism in Seventeenth-century Medical Science', *Medical History* (in press).

Translated into Latin, but not yet Publish'd.'<sup>112</sup> It seems likely that the manuscript texts in the Boyle Papers comprise the unpublished translations there referred to. Many of these are in the hand of Thomas Ramsay; others in that of Oldenburg; others in hands L, M and N. In cases where the archive contains an unpublished translation of a text of which a translation was in fact published, it occasionally turns out that the manuscript version is a draft for the published one, as is the case with the fragment of 'New Experiments about the Preservation of Bodies in Vacuo Boyleano' (1674) in BP 9, fols. 173–4, where the manuscript shows corrections which were incorporated in the printed text. More often, as with the manuscript translation of *Experiments, Notes &c. about the Mechanical Origin or Production of Divers Particular Qualities* (1675–6), the unpublished version is closer to the English than that published, which is in more polished and literary Latin. Perplexingly, however, with the translation of the *Free Enquiry into the Vulgarly Receiv'd Notion of Nature* (1686) in BP 29, the position is reversed, and the unpublished version departs from the English more than is the case with the published one. A similar contrast appears between texts of which more than one different Latin translation is to be found in the collection, as with the two translations of 'New Experiments, touching the Relation betwixt Flame and Air' (1672) in BP 34. The translation in Ramsay's hand (BP 34, pp. 327ff.) is more polished and Latinate than that in hand L (34, pp. 353ff.). These texts would merit further scrutiny.

We then come to Boyle's experimental notes, one of the most voluminous sections of the archive. These have now been published in full in electronic form as Boyle's workdiaries, and it is to be hoped that this will lead to their being more widely used. They were deployed to a limited extent by Robert G. Frank in his *Harvey and the Oxford Physiologists* (1980), and some use has also been made of those from the 1650s by William R. Newman and Lawrence M. Principe in *Alchemy Tried by the Fire* (2002), but apart from this the field is almost virgin. Many of these notes are dated, thus making it possible to ascertain what trials Boyle was carrying out in the laboratory at any particular time in his life, and hence revealing a key facet of his activities. The workdiaries also contain the notes that Boyle made about information divulged to him by travellers and others who had witnessed unusual phenomena, which provide unexpected insights into Boyle's late seventeenth-century milieu. There are also quite extensive passages of notes from books. The entire genre is dealt with in more detail in chapter 3, below.

Equally important are various synopses, notes and other memoranda, together with fragments of text: apart from those which Boyle evidently rejected from books as he revised them, these are sometimes simply ideas which he jotted down in the hope that he might one day be able to incorporate them into a work. Indeed, these provide some of the most tantalising and unexplored parts of the archive. In particular, the archive contains

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112 *Works*, vol. 11, p. 189.



fragmentary materials relating to various books that Boyle conceived but apparently never brought to completion, such as his ‘Of the Discernment of Suppositions’, or his ‘Cogitationes Physicae’, while there are also extensive materials relating to a putative treatise on the use of sense, reason and authority in natural philosophy.<sup>113</sup> It is perhaps worth noting here that even quite brief papers by Boyle are usually neatly written out on a clean piece of paper, and it should be pointed out that Boyle was generous with paper, constantly having his amanuenses copy out texts and parts of texts on fresh sheets; this means that some of the headaches encountered in archives whose originators habitually wrote on the back of discarded drafts do not arise here.

There are also a number of transcripts of works made by others which Boyle acquired, and, though in general these exist elsewhere in published form, there are some exceptions: indeed, this is another area where further discoveries are almost certain to be made. Thus it was in BP 40 that the only known copy of the report to the Hudson’s Bay Company by Governor Nixon in 1682 was found, as published by E.E. Rich in 1945. In other cases, the Boyle Papers provide a significant witness to a text also found elsewhere, as with the copy in BP 19 of Thomas Willis’ 1661 Oxford lectures on the senses and neurological disorders, published by Kenneth Dewhurst in 1980. Even the material in the archive which is least directly connected with Boyle has potential for study, for instance the texts associated with John Warr senior described on p. 50, above, which might well prove illuminating. Indeed, there are almost certain ‘archives’ within the ‘archive’ in this case, since it seems likely that some of the material in the hand of the younger Warr was not prepared at the behest of Boyle, but represents his own intellectual interests and was only accidentally incorporated into the Boyle archive: this particularly applies to the theological notes in BP 3, and the dictionary material in BP 35. In the case of Henry Miles, too, though much of the material preserved among the Boyle Papers relates to his work on the archive, there are also various commonplace books and miscellaneous papers.

As this section should have illustrated, the Boyle archive represents a treasure trove for students of Boyle’s life, thought and context, in terms both of providing the archival foundation of the materials of Boyle now available in printed or online form, and of offering opportunities for new discoveries in the sections that have still not yet been fully explored. Despite the occasional imperfections of survival that have already been noted and which will be examined more fully in the next chapter, this remains the essential resource for all studies of Boyle, and will undoubtedly continue to do so for the foreseeable future.

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113 See BP 9, *passim*. For ‘Of the Discernment of Suppositions’ see below, p. 190, n. 37; for ‘Cogitationes Physicae’, see BP 8, fols. 210–12; BP 9, fol. 68; BP 10, fols. 26X, 99; and MS 186, fols. 123–4.

## Postscript: Boyle Manuscripts outside the Boyle Archive

That this is the case may be emphasised by providing readers with a brief survey of manuscript material by Boyle surviving in locations other than the Boyle archive. In fact, there is surprisingly little such material, most that there is having ‘got away’ either during Boyle’s lifetime or within a generation of his death.

First, there is a good deal of Boyle material in other parts of the archive of the Royal Society: the Original Register Book, the Classified Papers, the Early Letters, and more miscellaneous items such as MS 1 (Henry Oldenburg’s commonplace book). Taking these in order, the Register Book and the Classified Papers contain early versions of the papers by Boyle that were published in *Philosophical Transactions* and ancillary items, in the former case usually in the hand of the Society’s operator, Richard Shortgrave, in the latter often in the hands of Boyle’s amanuenses.<sup>114</sup> The Early Letters contain large quantities of correspondence to and from Boyle: indeed, one volume, Early Letters OB, contains all the letters that Boyle received from Henry Oldenburg and John Beale, collected together by Henry Miles in the mid eighteenth century as an adjunct to the work that he did on the Boyle Letters; in addition, as noted above in connection with the analysis of handwritings in the Boyle Papers, Early Letters B.1 contains such of Boyle’s letters to Oldenburg as survive (along with the ancillary documents already referred to), while further items relevant to Boyle are scattered through the series. All are fully tabulated and published in *The Correspondence of Robert Boyle*.

As for MS 1 (Oldenburg’s commonplace book), in addition to further material relevant to the *Correspondence*, this also contains the following three key texts, all of which have been published or fully tabulated elsewhere. First, there is Boyle’s ‘Reflexions on the Experiments vulgarly alledged to evince the 4 Peripatetique Elements, or the 3 Chymicall Principles of Mixt Bodies’, usually seen as the preliminary version for *The Sceptical Chymist*, published by Marie Boas [Hall] in 1954.<sup>115</sup> Secondly, Oldenburg’s copy of Boyle’s otherwise lost essay ‘Of Poisons’ was published in volume 13 of *The Works of Robert Boyle*.<sup>116</sup> Thirdly, Oldenburg’s abstract of essay 4 from Part 1 of *The Usefulness of Natural Philosophy* is noted and collated with the published version at the relevant point in the *Works*, though this text might be worthy of separate publication at some future date.<sup>117</sup>

The main items outside the Royal Society can mainly be associated with those who had responsibility for Boyle’s papers after his death. Of these the earliest was John Locke. The most important Boyle item now among the Locke papers in the Bodleian Library, Oxford, is the manuscript of a significant part of *General*

114 See *Works*, esp. vol. 5, pp. xxxv–xxxvi; vol. 6, p. xii; vol. 7, p. xl; vol. 9, p. xl.

115 Boas [Hall], ‘An Early Version of Boyle’s *Sceptical Chymist*’, *Isis*, 45 (1954), 153–68.

116 *Works*, vol. 13, pp. 237–57.

117 *Ibid.*, vol. 3, p. xx. See also below, pp. 251–2.

*History of the Air*, the most substantial portion of the manuscript of a published work by Boyle that survives, in this case as revised by Locke for the press. This is fully studied in volume 12 of *The Works of Boyle*, where a handful of fragments of manuscript text that were not included in the printed version are transcribed.<sup>118</sup>

Other Boyle items surviving in the Locke manuscripts are his transcripts, often of lost originals. There are five sets of 'heads' by Boyle, which evidently appealed to Locke's methodical mind: for *Cold* in MS Locke c. 31, fol. 49v, for *Human Blood* in MS Locke f. 19, pp. 272–3, 302–3, and for *General History of Air* in MS Locke c. 42, pp. 16–17, while two until recently unpublished sets of 'heads', for 'the history of diseases' and for a work on flame and fire, survive in MS Locke c. 42, part 1, pp. 98 and 266–7 (the latter is a copy of a text now in the British Library referred to below). Perhaps most important is MS Locke c. 44, which contains transcripts from Boyle's lost recipe collection and other material, as discussed in chapter 2, below.

The other figure mainly responsible for the diaspora of Boyle material was Thomas Birch (in some cases following William Wotton, who removed various materials from the archive for his planned biography of Boyle). Of these items, the most significant are the biographical items now in British Library Add. MS 4229, published in full in *Robert Boyle by Himself and his Friends* (1994). There are also various oddments of Boyle material scattered through the 'Birch' component of the Additional Manuscripts, notably a duplicate version of Boyle's letter to Henry Stubbe about Valentine Greatrakes and his cures, which is collated with the version of the same letter that survives in the Boyle Letters in the *Correspondence*, and Boyle's notes on his observation of Greatrakes' cures in April 1666, which are now published as part of Boyle's workdiaries.<sup>119</sup>

In the Sloane Collection there is the original manuscript of *Seraphic Love* (British Library, Sloane MS 72, fols. 233–58), and a set of 'heads' in Bacon's hand concerning diseases (Sloane MS 2502, fols. 1v–2: this is the source of Locke's version of this text noted above).<sup>120</sup> A further crucial manuscript is in the library of St John's College, Oxford, MS 66A, a transcript of the original version of *Theodora* made by Boyle's friend John Mallet which was presented to the college by a former Fellow, Charles Wheatly, in 1742.<sup>121</sup> More miscellaneous items

118 Ibid., vol. 12, pp. xviii–xxi and passim. One longer passage, on fols. 76v–77v, concerning the effects of the bite of the tarantula, remains unpublished.

119 See *Correspondence*, vol. 3, pp. 93–107: the MS survives partly in British Library Add. MS 4228 (the MS of Birch's 'Life' of Boyle) and partly in Add. MS 4376. Boyle's notes on Greatrakes' cures are in Add. MS 4293: for the edition, see <<http://www.livesandletters.ac.uk/wd>>.

120 See L.M. Principe, 'Style and Thought of the Early Boyle: Discovery of the 1648 Manuscript of *Seraphic Love*', *Isis*, 85 (1994), 247–60. For the 'heads' for the history of diseases, see Hunter, *Heads & Inquiries*, pp. 33–4 (for the heads on flame and fire in MS Locke c. 42 see *ibid.*, pp. 34–6).

121 See *Works*, vol. 13, pp. xxi–xxiii. See also Michael Hunter, 'A New Boyle Find', *BSHS Newsletter*, 45 (Oct. 1994), 20–1.



include such documents as a manuscript version of the section 'Observations on Mr Clayton's Diamond', published in *Colours*, in the Huygens collection at Leiden, and a manuscript copy of Boyle's 'Titles of the (Naturall and Experimentall) History of the Air' sent to Sir Robert Southwell in 1684, which was auctioned at Sotheby's in 1987 and the current whereabouts of which is unknown.<sup>122</sup>

Lastly, in the case of Boyle's correspondence, although a very high percentage survives in the Boyle archive or the Royal Society's Early Letters, the residue is predictably scattered. A crucial deposit is at Chatsworth, deriving from the collections of the leading branch of Boyle's family, the Earls of Burlington: this includes an important series of letters from Boyle to his father, the Great Earl of Cork, together with correspondence with his brother, the First Earl of Burlington, and some significant papers relating to Boyle's landed holdings in Ireland. More minor groups of letters survive in the Orrery Papers at Dublin and Petworth, while a group of letters from Boyle to the First Earl of Burlington seems to have been dispersed in the twentieth century and is now widely scattered.<sup>123</sup> Beyond that, there are the archives of Boyle's correspondents, as itemised in the *Correspondence*: Samuel Hartlib (now in Sheffield University Library), John Winthrop (now at the Massachusetts Historical Society), Christiaan Huygens (now in Leiden University Library), John Evelyn (now in the British Library) and Anthony Dopping (now in Armagh Public Library).<sup>124</sup> Correspondence relating to Boyle's involvement with the New England Company survives in originals or early copies at the Guildhall Library, in the Plymouth Colony archive, and in the Connecticut State Archive at Hartford, Connecticut. An important volume of letters from Boyle to Narcissus Marsh concerning the Irish Bible was twice sold at Christie's in 1989 and 1991 and is now in private hands. Other letters are widely scattered, and should be located through *The Correspondence of Robert Boyle*.

As the foregoing illustrates, this material as a whole is overshadowed by the vast and complex holding represented by the Boyle Papers, Letters and ancillary manuscripts at the Royal Society. It is for this reason that the present volume is almost exclusively focused on them.

122 See *Works*, vol. 4, p. xiii; vol. 12, p. xviii.

123 See *Correspondence*, vol. 1, p. xxi.

124 Ibid., pp. xxiff. The letters in the Dopping Collection came to light only after the edition was published. They are available in the supplement to the *Correspondence* at <<http://www.bbk.ac.uk/boyle>>.

## Appendix 1

### Henry Miles' List of Bound Volumes in the Boyle Archive and a collation of it with the 1840 and current classification of the manuscripts

#### **The Text of Miles' List: From Boyle Papers 36, fol. 196<sup>125</sup>**

##### List Bound books

- I With Strips of paper V. P. D. pasted on the edges bound like a Singing  
book matters containd tr[anscri]bd –  
NB. there is a list of Some of the MSS
- II Book bound in common way reddish Leather on Divine & Moral  
Subjects begins with a Discourse on Sin.
- III Book bound in Vellom long as Sing: book Memordanda [sic] – things  
to be done.
- IV Book Bound in Leather as Sing: book with large Green Strings  
contains various matters but XXX.
- V Another of the Same black<sup>126</sup> Strings but broke off various matters  
XXX. being tr[anscri]bd.
- VI De ipsa natura. Londini 1687. authore R. B.
- VII Zenobie Tragedie A Paris. 1653.
- VIII Acta Novæ academix Philo. Exoticorum Naturæ & artis, Brixia, 1686.<sup>127</sup>
- IX 8vo vellom Covers MS from printed Book – 1573.  
Le Son de La Trompete. Chemical.
- X Book without Covers long like Sing: book on Meditat. Mr. B's  
hand.
- XI 4to Vellom. Excerpta from severall authors some few Leaves of  
Coalpits damp managing Colchester Oysters.
- XII Thick 8vo Entit: Ethical Elements Mr B. own hand.
- XIII 8vo Black leather Covers severall Sermons writ out on whatsoever  
things are True &c. 4 phil. 8.
- XIV Locks Letters Toleration paper Covers.

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125 The text starts on fol. 196v and continues (from entry XVI) on 196r with the title repeated at the top of the page.

126 MS damaged.

127 Items VI to VIII bracketed together by Miles and described as 'printed'.

- XV In marble Covers observat. anatomic in Air Pump in French by p. Guide D. Medicine. paris 1674.
- XVI A Curiously bound book in 4to gilt leaves severall Treatises of Chemistry in Fr. & Lat it appears to have been Sr. K. Digbys by the mark KD<sup>128</sup> on the back.
- XVII a little one 12<sup>mo</sup> without covers against Romances damagd.
- XVIII an Imperf: book being mutilated, mostly in Fr on various Subj. Some in English an acct. of Italy Some arithm. & Geogr. in Vellom Covers.
- XIX A Small one Leather Covers Chemical & of Ph. Stone.
- XX Another Sing Book transcribd –
- XXI additions au Traite de L'Eau de Mer douce: &c. Quatr. Edit. no Covers, a Londres 1684.
- XXII one bound in Leather 12<sup>mo</sup> Ethical Elements begun at Stalbridge 1645.<sup>129</sup>
- XXIII Copies of Severall Letters of Mr. B. to friends 1645 & 46 in Leather Covers.

Collation with the 1840 and current catalogue

<i>Current no.</i>	<i>1840 no.</i>	<i>Miles no.</i>
10	10	XVI
22	22	XI
23	23	
25	25	
26		
38	38	IX
40	40	XIII
41	41	
43	43	
44	44	XVIII
137	Ap. 13	
138	Ap. 12	
179		XIX
180		
181		
185	Ap. 8	?I
186	Ap. 9	IV

128 Miles attempts to replicate the symbol with these letters intertwined. He deleted his initial attempt and tried again below the line.

129 Marked 'X' in margin.



Collation with the 1840 and current catalogue (*continued*)

<i>Current no.</i>	<i>1840 no.</i>	<i>Miles no.</i>
187	Ap. 10	?V or XX
188		
189		?V or XX
190		
191	42 Ap. 11	?I
192		XII
193		
194		
195		XXII
196		II
197		X
198		
199		
200		

## Appendix 2

### Boyle's Library

Royal Society MS 23 is an item which evidently came to the Society with the Boyle Papers, a volume in the hand of Boyle's servant and executor, John Warr junior. Originally, Warr made theological notes in the volume; later, however, he used it to inventorise and value a collection of books. A transcript of this listing, sorted alphabetically, was published by John Harwood in his 1991 volume *The Early Essays and Ethics of Robert Boyle*, under the title 'Boyle's Library', and works included in the list have been cited as if they were owned by Boyle, for example by Malcolm Oster.<sup>130</sup> However, although this item appears to have reached the Royal Society with the Boyle archive, and is therefore included in the catalogue below (it was also included by University Publications of America in their microfilm edition), it should be stressed that the books listed in the volume are far likelier to be Warr's than Boyle's, and the reasons for this will be briefly indicated here.

It should be explained that the list is interspersed by notes as to the whereabouts of the books, and these show that the books were kept in various rooms in a house in Brewer Street, in Warr's 'Roome at my Master's', or in Thomas Smith's bedroom, also in Boyle's house. This would mean that, even if the books in question were part of Boyle's library, we would be seeing only the 'backstairs' part, as against the books kept in Boyle's own rooms, and the value of arguments from the general physiognomy of the collection would be thereby reduced. On the other hand, it is much likelier that, though partially stored in Boyle's house, the books were in fact Warr's own. One clue suggesting this is the fact that on fol. 26 Warr details 'Bookes of mine in Octavo (replacing Quarto) on the upper Long shelve in my roome at my Masters': in this quotation, 'of mine' is inserted (as is 'in my roome'), perhaps to differentiate these from other books on the same shelf owned by someone else.

The evidence adduced by Harwood in favour of the books being Boyle's is at best inconclusive. Thus the fact that the books are valued and that on fol. 23v numerical totals of those 'to be k[ept]' and 'to be s[old]' are included, in conjunction with the fact that the most recent book in the list was published in the year of Boyle's death, is taken to suggest that the list was prepared in connection with the dispersal of Boyle's library. But it is equally likely to

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130 Harwood, *Essays and Ethics*, pp. 249–81; Oster, "'The Beame of Divinity': Animal Suffering in the Early Thought of Robert Boyle", *British Journal for the History of Science*, 22 (1989), 151–79, on p. 171 n. 107.

represent a partial dispersal of Warr's own books at the point when the Boyle residence was being cleared, hence explaining why the volumes were mostly in his quarters at Boyle's or in his own house (the fact that some books were in Smith's room proves nothing one way or the other).

It is particularly important to note that the house in Brewer Street was clearly Warr's, and was not Boyle's house in the City, as Harwood has suggested. For one thing, Boyle's City house was almost certainly the 'Messuage or Dwelling House in St Michael Crooked Lane', the proceeds from the outstanding lease of which went after Boyle's death to help fund the Boyle Lectures.<sup>131</sup> Secondly, Harwood's reason for believing that Brewer Street was not Warr's residence is based on a misreading of the evidence. On p. 250 of 'Boyle's Library', Harwood claims that on fol. 9 of the manuscript Warr refers to two out of a set of three volumes of Foxe's *Book of Martyrs* as being missing from Brewer Street because they were in his 'upper Closet at home', adding 'This comment makes sense only if Brewer Street was not his residence'. In fact, however, the location of the books listed on the recto of fol. 9 – including these – is not given; it is on the verso of the folio that the location of Brewer Street is given, and here, sure enough, the two missing volumes of Foxe appear.<sup>132</sup> Hence, so far from implying that Brewer Street was not Warr's home, this piece of evidence proves that it was. In all, it seems far likelier that we have here a catalogue of the books belonging to one of Boyle's servants than to Boyle himself. But this does not remove the interest of the collection, since it is revealing of the intellectual milieu in which Boyle lived.

The fate of Boyle's own books – which was regretted at the time – has been discussed by R.E.W. Maddison and J.F. Fulton.<sup>133</sup> It seems fairly clear that they were dispersed by sale shortly after his death; though a part of the collection is documented by a printed auction catalogue, the fact that it is mixed in with other properties makes it almost impossible to draw conclusions from titles that do or do not appear within it. Over the years, a handful of volumes from the library have come to light,<sup>134</sup> but the harvest of such items is disappointingly meagre. Most unfortunately, a catalogue of the library which survived in Miles' time is now lost; Miles described it as a 'Catal[ogue] of Mr B[oyle]'s Books & Pamphlets: not of his Works but his Library' (BP 36, fol. 157; cf. *ibid.*, fol. 149).

131 Maddison, *Life*, p. 275.

132 It is presumably linked to this misreading that Harwood asserts that there were two copies of this work (*Essays and Ethics*, p. 264).

133 Maddison, *Life*, pp. 198–200; Fulton, *Bibliography*, pp. iv–vi. For contemporary regret, see Evelyn's letter to Tenison of 16 July 1692, British Library Add. MS 78299 (no. 668).

134 Most recently, the copy of J.J. Becher's *Novum organum philologicum* (Frankfurt, 1674), purchased by Robert Hooke in 1693 probably from Boyle's library then being sold in Moorfields. This was advertised in Roger Gaskell's catalogue 28 (2001), item 25, and bought by the Wellcome Library.



## Chapter 2

# The Lost Papers of Robert Boyle

Michael Hunter and Lawrence M. Principe

### Introduction

The Boyle Papers at the Royal Society often seem dauntingly voluminous to those confronting them for the first time. With the associated Boyle Letters, they constitute an archive of over seventy volumes, containing over 20,000 separate leaves, and once described as ‘uncatalogued and uncataloguable’.<sup>1</sup> Over the past decade and a half, substantial steps have been taken both to catalogue the archive and to publish significant sections of it. These have resulted in some remarkable discoveries, which have thrown new light on various of Boyle’s activities and preoccupations, from his alchemical and medical concerns to his overall intellectual development.<sup>2</sup> Moreover, some of the material that has been made available has hardly had time to be exploited – including the newly edited series of Boyle’s ‘workdiaries’<sup>3</sup> – and it is certain that many more important discoveries have yet to be made, which will further underline the significance of this collection for a fuller understanding of Boyle.

Yet the burden of this chapter is to suggest that the archive is seriously incomplete as compared with its state during and shortly after Boyle’s lifetime. This conclusion is based primarily on a pair of inventories of Boyle’s papers made in the mid eighteenth century by one of his principal early students, the dissenting minister Henry Miles. Miles gained possession of Boyle’s papers partly in the 1730s and partly in the early 1740s, and he did most of the work on them that was to see the light of day in Thomas Birch’s edition of Boyle’s *Works*, published in 1744. Scrutiny of Miles’ lists in the light of what we now know about the current content of the archive suggests that a disturbingly high proportion of the collection as itemised by Miles is no longer extant, for reasons to be explored in this article and with implications which will be briefly sketched at the end.

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1 M.A. Stewart, quoted above, p. 30.

2 See Lawrence M. Principe, *The Aspiring Adept: Robert Boyle and his Alchemical Quest* (Princeton, 1998); Michael Hunter and Edward B. Davis (eds.), *The Works of Robert Boyle*, 14 vols. (London, 1999–2000), esp. vols. 13 and 14; Michael Hunter, *Robert Boyle (1627–91): Scrupulosity and Science* (Woodbridge, 2000).

3 See below, chapter 3.

The texts from which these conclusions have been derived are printed in annotated form as appendices to this chapter. Our text comprises a transcript with an adjacent column in which we have surmised what each item is, if it survives, and have marked items that are no longer extant. A significant number of entries are wholly or partly in Miles' shorthand, of which Lawrence Principe has made a special study, and these words or sections have been marked with underlining.<sup>4</sup>

### Henry Miles' Inventories of Boyle's Papers

Of the two lists by made by Henry Miles, one is dated 10 February 1743 and the other is undated. The undated catalogue is entitled 'List of Papers markt', and is divided up into a series of categories headed by letters of the alphabet from A to Z, then starting again with a second alphabet denoted 'Aa', etc., which went as far as 'Ma' (see Plate 16). This list (hereinafter 'List of Papers') survives as a pair of folded foolscap sheets now constituting BP 36, fols. 157–60, though it is possible that there was a further leaf or leaves no longer extant. The second list, titled and dated 'List of Titles as I sort em Feb. 10 1742/3', itemises 276 separately numbered items. This list (hereinafter 'List of Titles') is now to be found as a scattered series of leaves, bound (out of order) as BP 36, fols. 141–3 and 163–4.

The reason for the existence of the two separate lists can almost certainly be explained in terms of what we know about the history of the Boyle archive in the early eighteenth century.<sup>5</sup> At Boyle's death, a significant proportion of his papers passed to his former servant and assistant, John Warr, and on Warr's death in 1715, these passed to another of Boyle's former amanuenses, Thomas Smith. At some point in the 1730s, Smith placed these papers in the hands of Miles, 'with leave to make use of them for the public good', and it was on this basis that Miles entered into partnership with Thomas Birch to produce the 1744 edition of Boyle's *Works* with which Birch's name is normally associated. Our surmise is that the undated list dates from this stage in Miles' operations, that is, the years between 1738 – when he was introduced to Birch by their mutual friend, the scholar John Ward – and 1742. Our

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4 For the overall editorial principles used, see Michael Hunter, 'How to Edit a Seventeenth-century Manuscript: Principles and Practice', *The Seventeenth Century*, 10 (1995), 277–310. In view of the list format of the documents, we have been sparing in expanding contractions; words shown in angle brackets in the form of arrow-heads are insertions.

5 See R.E.W. Maddison, 'A Summary of Former Accounts of the Life and Work of Robert Boyle', *Annals of Science*, 13 (1957), 90–108; above, pp. 22–8, 39–40. For further information on Wotton, Miles and Birch and their activities see Michael Hunter, *Robert Boyle by Himself and his Friends* (London, 1994), pp. xxxviff. See also Lawrence M. Principe, 'Newly Discovered Boyle Documents in the Royal Society Archive: Alchemical Tracts and his Student Notebook', *NRRS*, 49 (1995), 57–70.

presumption is that, as he sorted this material, Miles placed it in the bundles itemised in his list.<sup>6</sup>

In 1742, however, Miles came to learn that what he had was only a part of the entire archive. The rest had been abstracted by the scholar William Wotton, who made preparations for a 'Life of Boyle' which he partly wrote but which was never published. Wotton had been given permission to remove from the archive whatever he needed for his 'Life', and much of this material was still in his possession at his death in 1727, passing thereafter to his son-in-law, William Clarke. Only after elaborate negotiation did Miles finally obtain the material in November 1742. It was in the aftermath of this that he compiled the second of his two lists.<sup>7</sup>

The lists thus bear witness to a continuing process of sorting and tabulating Boyle's papers in the generation after his death, first by Wotton and then by Miles. This process is in fact illustrated by a substantial series of further lists and memoranda by both Wotton and Miles, most of which survive in BP 36, and it may be helpful to the reader to contextualise the two lists presented here by itemising the rest of the related items, most of which have been dealt with in full elsewhere.

By far the bulk of these relate to the Boyle Letters (in other words, to Boyle's correspondence), which by the time Miles made the lists that we are dealing with here had been largely separated from the Boyle Papers (in other words, Boyle's general literary remains) owing to the successive efforts of Wotton and Miles himself.<sup>8</sup> Wotton had made a careful listing of 385 letters, complete with index, which is printed in full in annotated form in the recent edition of *The Correspondence of Robert Boyle*.<sup>9</sup> There are no equivalent listings by Wotton of the Boyle Papers, though it seems likely that they once existed, since many manuscripts in the archive have endorsements by him which suggest quite a sophisticated system of classification on his part.<sup>10</sup> Instead, all that we have is a brief list by William Clarke of the number of pages of manuscripts on different topics in his possession, which is too general to marry with Miles' detailed records printed here: for instance, the entry for 'A' comprises 'Acid & Alkali 1, Air 11, Animals 13', that for B, 'Blood 11, Body 14', and so on.<sup>11</sup> This list includes a section itemising various biographical manuscripts in Wotton's

6 That the bundles were his rather than of earlier date is suggested by the way in which he can be seen at work adding to them and moving material between them.

7 That the 'List of Titles' dates from after Miles' acquisition of the Wotton group of papers is confirmed by the reference to him in it; see below, appendix 2, item no. 25.

8 It is perhaps worth noting that letters seem generally to have been included in the current inventories only if they were in the nature of treatises – e.g. Beale's letter of 1665, item no. 84 in appendix 2 (though the process of sorting seems sometimes to have been imperfect).

9 *Correspondence*, vol. 1, pp. xxvff., and vol. 6, pp. 397ff.

10 See above, p. 40.

11 The original of Clarke's list survives as British Library Add. MS 4229, fols. 69–70, and a copy by Miles is to be found in BP 36, fol. 202.



hands, while in addition Miles made notes on Wotton's 'Sketch' of Boyle's 'Life'; these too survive in BP 36, fol. 128, though the sketch itself is lost.<sup>12</sup>

As for Miles' own lists and memoranda, a high proportion of these also relate to the correspondence, an extensive selection of which was published in Birch's edition of Boyle's *Works*; these are therefore dealt with at length in *The Correspondence of Robert Boyle*.<sup>13</sup> Thus we have listings of groups of letters that are still extant, including those of Henry Oldenburg and John Beale, and of the miscellaneous collection of material that now makes up volume 7 of the Boyle Letters. There is a comparable listing of letters from Robert Hooke, the texts of which survive in Birch's printed edition, though all but one of the originals have been lost. We also have an abstract made by Miles of the content of a letterbook of Boyle's of 1645–8, together with lists by him of a more miscellaneous selection of letters. The latter bear witness to the process of sorting on Miles' part, in which he jotted down details of the letters as he came across them, evidently with a view to reordering them in an alphabetical sequence; there is also a comparable list in the hand of Thomas Birch. These, like the Wotton inventory, are of interest not least because they reveal that huge quantities of letters which survived until the mid eighteenth century have since been lost, and these losses are tabulated in *The Correspondence of Robert Boyle*. Exactly when and why the losses occurred is not entirely clear, but we will say more about them by way of background to the losses to the main archive later in this chapter.

There are also various documents relating to the principal text published from manuscript in the Birch edition of Boyle's *Works* on the basis of Miles' editorial work, namely the second part and the appendix to the first part of *The Christian Virtuoso*. This was, in fact, Miles' main priority in his work on the archive: in one of his memoranda he notes, 'I principally inquire for Materials for Christian Virtuoso'.<sup>14</sup> Some of Miles' documents list manuscript material while others sketch out the structure of the sections of the work as published by Miles. These have been dealt with in connection with the newly edited version of this text in volume 12 of the new edition of *The Works of Robert Boyle*.<sup>15</sup> An ancillary document in Miles' hand, BP 36, fol. 136, represents his incomplete epitome of Boyle's 'Heads' for his 'Tract about Atheism', now published by J.J. MacIntosh as part of his reconstruction of Boyle's work on this topic. Miles' abstract is clearly linked to his extensive transcriptions of related material, which suggest that he aspired to a compilation bearing some resemblance to that which MacIntosh has brought to fruition.<sup>16</sup> In addition,

12 For a discussion, see Michael Hunter, *Robert Boyle by Himself and his Friends* (London, 1994), p. xlvii.

13 *Correspondence*, vol. 1, pp. xxvii–xxxii.

14 BP 36, fol. 125.

15 See *Works*, vol. 12, pp. xlixff.

16 For the MS that Miles was epitomising, see BP 2, fols. 76v–7, published in MacIntosh, *Boyle on Atheism*, 1.1. For Miles' transcriptions of relevant material, see BP 5, fols. 1–15, and BP 7, fols. 233–52.

Miles' list of Boyle's unpublished writings is published and analysed in volume 14 of the new edition of *The Works*, while a full account of his list of 'bound books' that he sorted from the archive has already been published elsewhere.<sup>17</sup>

Apart from these, the only other documents by Miles that survive in BP 36 (apart from certain personal papers of his own) comprise the lists published here, together with a handful of ancillary documents, which are as follows. BP 36, fol. 149, lists the items that appear under 'E' in Miles' 'List of Papers' (though here they are rather confusingly said to be 'markd O'). The document also includes ancillary memoranda, mentioning a few items not otherwise recorded by Miles which had presumably come to light during subsequent sorting on Miles' part.<sup>18</sup> BP 36, fol. 168, similarly duplicates section 'Q' and other parts of the 'List of Papers', with ancillary queries and memoranda in which a handful of fresh items again appear,<sup>19</sup> while BP 36, fol. 166, comprises similar notes, also

17 For the list of unpublished writings (BP 36, fol. 155) see *Works*, vol. 14, pp. 356–8; for the list of bound books (BP 36, fol. 196), originally published in Principe, 'Newly Discovered Boyle Documents', see above, pp. 68–9.

18 These are as follows: in the left-hand column, 'a Charge in Lect Cant' [?], 'Old Fr MS. octavo', 'a Fr M.S. Mr B. owne hand no. 9 in List <perhaps>' [probably two bound MSS: cf. above, n. 17]) and 'a Diurnal of Observat. 1647 at Stalbridge much of it Fr in 4to' [Boyle's first workdiary, now BP 44, fols. 84ff.]. Interspersed between the two parts of the 'List of Papers packt together markd O' are the following items, headed: 'List of Papers markt NW. petition of parish: of Stalbridge against parson Rich' [now BP 40, fols. 10–11], 'E.India Companies Petit.' [ibid., fol. 12] and 'Scotch Witch' [see appendix 2, no. 189]. See also the memoranda quoted on pp. 86–8, below. It is perhaps also worth noting that, of the 'Loose Papers' Miles here notes: 'Mem: to put all such together & all Books of all kinds together'. Note also a further fragment of the draft of the 'List of Papers' in BP 26, fol. 84(2), a slip of paper with 'polish silver worke with Putty & Water[,] Brasse with Tripoly & Water' in Miles' hand on the recto and, on the verso at right-angles, a draft for bundle 'P' as far as 'Q. if printed'.

19 These are as follows:

- Vindication of Some Ladies abusd in a Libel [lost]
- Consolatory Letter to a Lady on death of her daughter [lost]
- on Cruelty to beasts [presumably BP 37, fols. 186ff.]
- Soul Brutes [perhaps BP 17, fols. 165–7]
- Irish act £2592 given R.S. [BP 40, fol. 4]
- Double writing Instrument almost Illegible [possibly Petty's: not in BP]
- a Remark concerning Cogitationes Physicæ concerning the speakers in the Dialogue [probably lost]

It then has the following list:

Some Papers not Letterd on the Wrapping Paper therefore figurd

- I. Containing papers on Electrical Bodies &c. [perhaps BP 22, pp. 197–200, and BP 38, fol. 120]
- II. On Occult Qualities [presumably BP 22, pp. 201ff.]
- III. Pores [perhaps BP 8, fol. 46v.]
- IV. Of Pores & Fig. of Saltpetre of Traction &c somewhat imperfect. – about Lime – NB these belong to former. [Evidently the synopses surviving in BP 10, fols. 87–8 (pores) and BP 26, fols. 75–6 (lime); the others are lost]

In addition, in the left-hand column under the heading 'To be done' is the note: 'in a Bundle

including further otherwise unrecorded items.<sup>20</sup> Fols. 167, 169 and 179, on the other hand, comprise notes interspersed with queries to be addressed to Birch and John Ward in connection with the Birch edition of Boyle, sometimes alluding to the putative relationship between the manuscripts and the edition, a topic to which we will return.<sup>21</sup> In this connection, it is appropriate to note that, although the additional sections of *The Christian Virtuoso* were the only texts printed from manuscripts in the Birch edition, the formal agreement (dated 16 July 1741) between Miles and Birch concerning the edition specified that Miles might select further manuscripts ‘proper for publication, & not yet printed’, though none in fact was actually included in the printed text.<sup>22</sup>

The final two documents in BP 36 comprise abstracts of the lists presented in full here. BP 36, fol. 146, is a single sheet giving a synopsis of the material: the items in it are given titles that are often recognisably similar to those in the inventories, as are the number of pages for each item, but the titles are more succinct while the pagination often groups together items that were dealt with separately in the earlier lists. Only one item appears here that fails to appear in either of the lists – a manuscript of Boyle’s *Martyrdom of Theodora, and of Didymus* – but elsewhere extra comments are very occasionally given.<sup>23</sup> These comments are noted here, but the text is generally so repetitive that it has not seemed worth reprinting it in full. What is distinctive about it is Miles’ attempt to group the items together under general headings, which are as follows: ‘Nat. Philosophy’, ‘Chemistry’, ‘Salts’, ‘Medicine’, ‘Minerals’, ‘Poysons’, ‘N. History’, ‘Seeds plants &c.’, ‘Tast’ and ‘Hydrostatics’, after which it tails off into a section of ‘Miscellaneous papers’. As such, this document appears to be the first summary or abstract that Miles made of his original numbered ‘List of Titles’.

BP 36, fol. 171, is an even briefer summary under the same headings; in this case, there is only a single addition, two copies of Boyle’s early *Aretology* or ‘Ethical Elements’, items now housed as Royal Society MSS 192 and 195, then

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inscribd selected from T. for addenda severall papers to be transcribd on the subject of Conversion of Infidels’. This could relate to further items now in BP 4.

20 These are as follows (headed ‘not numberd’):

Several Centuries Experiments & Observat: viz. I. VII, IX, XI [i.e. workdiaries, though it is hard to make sense of Miles’ numbers]

Difference Heat & Cold in Summer & Winter a single sheet [lost]

Heads of a History Light [possibly BP 26, fols. 62, 70, or BP 36, fols. 98–9]

Hooke’s paper concerning Newton’s theory of light [BP 20, pp. 1 ff.]

Newton’s paper on light read to the Royal Society on 9 Dec. 1675 [no copy is now extant in the Boyle papers: i.e. a different item from the 1672 letter, appendix 2, no. 260, the identity of which is confirmed by a further note on fol. 169].

21 For the memorandum on fol. 167v, see below, p. 79.

22 BP 36, fol. 50. For another copy see British Library Add. MS 4229, fol. 79.

23 The entry in question is ‘Martyrd. Theod. & Dyd.’: only a fragment of the MS of this work survives in the Boyle Papers: see *Works*, vol. 11, p. xii. The comments are quoted on pp. 87 and 88 below.



(as now) two small, separately bound volumes which had previously been listed among ‘bound books’ in the collection. Hence this list reflects a further level of organisation and reordering.<sup>24</sup>

### The Content of Miles’ Inventories: Varieties of Lost Items

We now turn to the content of Miles’ inventories. Miles’ ‘List of Papers’ (appendix 1) itemises a series of bundles – the ‘marks’ to which the title refers must have been the cover-sheets to these bundles, which occasionally survive scattered through the Boyle Papers.<sup>25</sup> The fact that the bundles could be enlarged or diminished at will meant that Miles could add or remove items, and the list seems to show this process going on, as do scattered notes surviving in the Boyle Papers, as where he endorsed one item ‘To be put in T’.<sup>26</sup> In addition, Miles seems, after he originally compiled the list, to have gone through it again, marking a number of items as being removed to a file called ‘ADDITIONS’; this evidently comprised material which he thought might be included in Birch’s edition of Boyle’s *Works* then in progress, as is confirmed by a note, partly in shorthand, in BP 36, fol. 167v: ‘a Tract by way of Dialogue concern: fire and flame (so on back side) is put into the Bundle entit. ADDITIONS. h.e. those as may be likely to be inserted in the Works’. Other items are asterisked: one of these is an item marked ‘to be inserted in life’, and it may be that the others so marked were also intended for this destination. Miles did indeed provide a handful of documents for insertion in the *Life of Boyle* by Birch that was prefixed to the 1744 edition, as had been promised in the agreement of July 1741 which has already been referred to.<sup>27</sup>

By comparison, the numbered ‘List of Titles as I sort em’ (appendix 2) bears witness to less retrospective editing on Miles’ part, probably because, by the time Miles had received the material from Wotton that it lists, Birch’s edition was so far advanced that it was less feasible to earmark items for inclusion (although, here too, it seems likely that some items were extracted and forwarded to Birch). The numbers in the list were probably for Miles’ tabulatory purposes rather than being actually written on the manuscripts in

24 See Principe, ‘Newly Discovered Boyle Documents’. The *Aretology* is published in J.T. Harwood (ed.), *The Early Essays and Ethics of Robert Boyle* (Carbondale and Edwardsville, Ill., 1991). Miles’ exact wording is: ‘Ethical Elements in 3 (in one Copy & in two books in another Copy 1645’. The content of this work is listed by Miles in BP 36, fol. 140.

25 BP 26, fol. 100a (‘La’) [accompanying the recipes that appear under this heading on the list] and possibly also BP 38, fol. 82v (‘Qa’). However, the latter appears in juxtaposition with miscellaneous jottings, and it is not clear that it is Miles’ hand; if it *is*, it suggests that the ‘List of Papers’ may be incomplete, since this is after the last bundle mentioned by Miles: see below, p. 113).

26 BP 3, fol. 147v.

27 See above, p. 78. For the documents published in the *Life*, see Hunter, *Boyle by Himself and his Friends*, p. lix, and *Works*, vol. 12, pp. xlvff. and 353ff.

question, since we have not found such endorsements on the actual manuscripts which can be identified. It is perhaps worth noting here that, though the bulk of the items in the 'List of Titles' are different from those in the 'List of Papers', there is a small degree of overlap between the content of the two, for which there could be various explanations. One is that the items in question were duplicates made during Boyle's life. Another is that Miles returned some items from his bundles to the unsorted mass of material and therefore found himself sorting them again.<sup>28</sup>

Various general comments on the lists should be made here. Miles sometimes remarks on the handwriting of documents; he could recognise the hand of Boyle's principal amanuensis, Robin Bacon, as his note at the head of the 'List of Titles' implies. On the other hand, he seems to have mistaken the hands of various of Boyle's other amanuenses for Boyle's own.<sup>29</sup> He also sometimes speaks of an 'old hand' (e.g. no. 45), evidently meaning early hands, often of the 1650s. Many items bear Miles' comment 'laid aside', which seems to imply that Miles saw the item in question as tangential. This was often because it was not by Boyle himself (though Miles sometimes made errors of attribution),<sup>30</sup> and, evidently because of this, most items thus marked are no longer extant. At one point Miles cites the virtuoso and divine William Derham, whose edition of *Philosophical Experiments and Observations of the late Eminent Dr Robert Hooke ... and Other Eminent Virtuoso's in his Time* (1726) may well have been one of Miles' models in his editorial work.

What can be said concerning the content of the inventories? Obviously, although the lists are quite extensive, they are brief by comparison with the full inventory of the archive first published in 1992, and by no means all the current content of the Boyle Papers is noted in them. It does not help that the archive was completely reorganised in the nineteenth century, and one of the few volumes that is now recognisable as one of Miles' bundles inventoried in the 'List of Papers' is BP 43, originally bundle K. On the other hand, the items listed include virtually every type of material that is still to be found in the archive, including documents relating to Boyle's natural philosophy, his theology, his concern with missionary work and his links with his Restoration milieu more generally. It is also worth noting that items that we have definitely

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28 It is worth noting here that the 'List of Titles' displays various endorsements in red crayon which may be summarised here. The following entries are crossed through: 5–14, 131–42, 151–8, 166–78 and 184–9. The following are marked with a cross: 20–1, 23, 25, 32–3, 37, 44–5, 47–53, 56–70, 72, 76–85, 87–93, 95, 97–104, 110–12, 115, 117–19, 122–5, 143–9, 159–62, 164–5, 182–3, 192–204, 206–8, 210, 214, 222–45, 249–57. The following are marked with a line: 22, 24, 26, 28–31, 42–3, 54–5, 71 73–5, 86, 94, 105–8, 113–14, 120–1, 190, 205, 211. In addition, nos. 26(bis) and 27 have a cross in ink.

29 See esp. bundle 'K.a.' in appendix 1 below, where Miles identifies as 'Mr Boyles Autogr.' an extant item in hand B. For other examples, see, e.g., BP 3, fol. 109 (hand D), or *Correspondence*, vol. 3, pp. 93 and 107n. (where the MS in question is in hand E).

30 See, e.g., in appendix 2 below, item no. 49.

been able to identify come from a wide range of different volumes of the archive as currently arranged. Some categories of material that make up a large section of the current archive are underrepresented, such as Latin translations of Boyle's works, possibly because Miles saw these as relatively unworthy of record, and the same is true of works by others. On the other hand, occasional examples of both appear, and there was probably an element of randomness or inconsistency in the tabulating operation that took place.

There is also a problem in cases where Miles' identification is rather vague, or where he was clearly dealing with a miscellaneous group of papers. Hence, there is probably a marginally greater degree of overlap between the material listed by Miles and the extant papers than we have been able to tabulate. It is also worth noting that, even where a document mentioned by Miles survives, it could be a duplicate of a lost original seen by him.

Both of Miles' inventories are in any case likely to be incomplete. The 'List of Papers' occupies exactly two folded foolscap leaves and, as already noted, further pages could easily be missing.<sup>31</sup> As for the 'List of Titles', this peters out on a rather scrappily written part-sheet of paper, almost as if Miles were growing weary of the task. Hence, though it seems likely, in view of the wide spread of his endorsements and marks in the extant archive, that Wotton's selection of papers was quite systematic, we cannot be sure how far through it Miles had got when his listing ended at no. 276.

What this chapter must emphasise, however, is how many items in the inventories printed here can be categorically stated no longer to be present. Though there are a few cases of works for which extensive manuscript material still survives in the Boyle archive and tallies with the material itemised in the lists, perhaps notably *Notion of Nature*, even in this case some of what was then extant is now lost,<sup>32</sup> while in other instances whole documents, or significant parts of them, are missing. Some of these items have already been noted by the current authors elsewhere, notably writings from Boyle's literary phase in the 1640s, particularly his 'Apology for & antagonist of Romances', and his papers on second sight and related topics.<sup>33</sup> Otherwise, the lost material falls into a variety of categories.

There are thus tantalising items that would be of great biographical interest, such as the 'Diary of his life' – assuming that this is not a misidentification of one of his workdiaries – and the 'Catalogue of Mr B's. Books & Pamphlets: not

31 See also above, n. 25.

32 See Michael Hunter and Edward B. Davis, 'The Making of Robert Boyle's *Free Enquiry into the Vulgarly Receiv'd Notion of Nature* (1686)', *Early Science and Medicine*, 1 (1996), 204–71, reprinted as ch. 5, below. See also in appendix 1, bundles 'E' and 'V', and in appendix 2, items nos. 247, 249–50.

33 See L.M. Principe, 'Virtuous Romance and Romantic Virtuoso: The Shaping of Robert Boyle's Literary Style', *Journal of the History of Ideas*, 56 (1995), 377–97, on pp. 380–1 and 386; Michael Hunter, *The Occult Laboratory: Magic, Science and Second Sight in late Seventeenth-century Scotland* (Woodbridge, 2001), pp. 9–10.



of his Works but his Library', the absence of which has long frustrated modern scholars.<sup>34</sup> Potentially equally interesting is 'Mr Boyles observ. on Colepits near Mendip Anno 1658' or 'Catalogue of Curiosities in a Journey thro' Staffordshire' (assuming that this is a document by Boyle).<sup>35</sup>

There are extensive sections of works by Boyle that were never published in full or at all. One of the most intriguing is his 'Of the Fuel of the Solar Fire. A conjectural Discourse', listed in Boyle's inventories in his later years, and briefly described in *Notion of Nature*, but now lost, or 'Essay II. of concealment & disguises of Seeds', again briefly referred to by Boyle but no longer extant.<sup>36</sup> Equally tantalising are the vast sections of *The Usefulness of Natural Philosophy*, including an entire essay now not extant, 'of the Usefulness of the naturalist's Curiosity to his country or That the naturalist may much advantage men by exciting & assisting their Curiosity to discover take notice and make use of their home bred riches and advantages of particular countrys & increase their No.'<sup>37</sup> There were dozens of pages of Boyle's 'Dialogues concerning Heat and Flame', of which we now have only a handful of fragments.<sup>38</sup> Likewise there is his 1650s essay on 'Turning Poisons into Remedies', which Miles recorded as seventy-two pages in length, now lost and known only through the briefer version of it copied by Henry Oldenburg.<sup>39</sup> There were pages and pages of manuscripts on 'sensation', on seminal principles and on menstrea.<sup>40</sup> There are also extensive sections of manuscripts relating to published works of which virtually no manuscripts survive, such as *Sceptical Chymist*, *Certain Physiological Essays*, *Colours* and *Cold*.

Miles' inventories also record numerous works by others, including critiques of Boyle's writings, for example a set of 'queries' concerning *Notion of Nature* by the virtuoso Peter Nelson and 'Remarks (in a Letter) on Mr B's philos. &c' by the notorious Henry Stubbe.<sup>41</sup> There were texts relating to Thomas Hobbes' polemics with the Fellows of the Royal Society, and accounts of barometric experiments by Henry Power and Richard Towneley.<sup>42</sup> Lastly, there are documents illustrating Boyle's interest in the current affairs of his day which are no longer extant. For instance, 'Papers presented to the K[ing]. C[harles]. 2<sup>d</sup>. by Reynolds[,] Baxter in Mr Oldenburghs hand' must refer to papers connected with the Savoy Conference between the Anglicans and the

34 See J.F. Fulton, *A Bibliography of the Hon. Robert Boyle* (2nd edn, Oxford, 1961), pp. iv–vi; above, pp. 71–2; see appendix 1, bundles 'D' and 'E'.

35 Appendix 2, no. 112; and appendix 1, bundle 'Q'.

36 BP 36, fol. 166; Appendix 2, nos. 16, 165. *Works*, vol. 4, p. 517; vol. 10, pp. 366, 480; vol. 14, p. 342.

37 Appendix 2, nos. 6, 62, 143.

38 Ibid., nos. 45, 202–4.

39 Ibid., nos. 136ff., 170–2.

40 Ibid., nos. 17–19, 25, 66–9.

41 See appendix 1, bundle 'I a', and appendix 2, no. 24.

42 Appendix 1, bundles 'Q' and 'Ba', and appendix 2, nos. 72, 213, 258.

Puritans at which the Restoration church settlement was hammered out in 1661, while ‘Dugdales Papers and others about Sir E. Godfreys murther’ concerned the zealously Protestant JP who received the depositions from Titus Oates about the Popish Plot in 1678, and whose subsequent death did much to raise the political temperature in the latter part of that year.<sup>43</sup>

If anything, a higher percentage of significant-sounding material that is no longer extant is to be found in the ‘List of Titles’, comprising the part of the archive acquired by Miles from Wotton, who had clearly picked the cream of the collection on the basis of his very astute scrutiny of it. Hence, the losses could hardly be more damaging, even though the overall percentage loss is hard to judge.

### **Losses prior to Miles’ Inventories**

The losses witnessed by the Miles lists, however, are only part of the story. A considerable amount of material had clearly been lost, dispersed, or destroyed even before Miles began gathering Boyle’s literary remains in the 1730s. The scope of these early losses can be partly gauged using several other sources. The first are the lists of Boyle’s unpublished writings which he himself had drawn up at various points during his career. A significant group of these date from the 1660s, and these refer to various titles which no longer survive, including not only some items that recur in the Miles inventories, but also others that do not.<sup>44</sup> The most notable of the latter are: ‘The Sceptical Naturalist, being a Letter about the Imperfections of Natural Philosophy, as we yet have it’; ‘A Discourse of Improbable Truths’; ‘A discourse of the discernement of Suppositions, shewing how much they are neglected, and yet how necessary to bee taken notice of in matters Philosophicall’; and – perhaps most tantalisingly of all – ‘The aspiring Naturalists, containing an accompt of some inventions & practises said to bee in use among the Inhabitants of an Island in amity with the new Atlantis’.<sup>45</sup> Further inventories survive from later in Boyle’s life, and these also occasionally refer to otherwise unknown ‘lost’ works, such as his ‘Paradoxes about Phlegms’, or his ‘Dialogue de Infinito’.<sup>46</sup>

In some cases, fragments of the works in question are still extant, while in others, references to the titles in question are to be found in Boyle’s published writings.<sup>47</sup> However, the difficulty with such evidence is that it is not always

43 See appendix 1, bundles ‘E’ and ‘Fa’.

44 For a complete text of these lists, see *Works*, vol. 14, pp. 327–55.

45 See *ibid.*, esp. p. 333. We have included the full version of the first two titles from the published list in *Cold: Works*, vol. 4, p. 517. On ‘The Aspiring Naturalists’, see n. 47.

46 *Works*, vol. 14, pp. 344–5.

47 For instance, for fragments of ‘The Aspiring Naturalists’, see Principe, ‘Virtuous Romance and Romantic Virtuoso’, pp. 390–1; for references to ‘The Sceptical Naturalist’, see *Works*, vol. 2, p. 36, vol. 8, p. 89, and perhaps vol. 9, p. 28.

clear how complete the books in question ever actually were; moreover, even if at one time they were more or less completely written, they may subsequently have been cannibalised to form part of books on related themes. This is perhaps illustrated by the way in which, between the early 1680s and 1691, a treatise described as ‘Observations upon the causes and Pretences and Remedies of Atheisme’ had degenerated into ‘An imperfect and mutilated Discourse containing Considerations about some Causes of Atheism’, evidently owing to the extent that Boyle had borrowed from it for writings on ancillary subjects that he had compiled in the interim.<sup>48</sup> Hence, although in some cases we may have further evidence of losses that could have taken place between Boyle’s death and Miles’ acquisition of his papers, in others this could be something of a mirage.

Boyle’s lists predominantly record completed or nearly completed treatises, and they are more cursory in dealing with notes, laboratory records and recipes, of which it seems that far more have disappeared. It is thus clear, as we shall see in the next chapter, that a significant part of the corpus of Boyle’s workdiaries no longer survives, though in this case these losses are balanced by substantial survival. On the other hand, what seems to have disappeared almost entirely is a separate and parallel resource to which Boyle appears to have attached almost equal significance, in the form of his collection of processes and recipes. We have two manuscript copies of a prefatory letter to this collection of ‘Processes Chymical & Medicinal’, addressed by Boyle to ‘Mr N.’, and it was clearly also the source of the compilation of medical recipes that Boyle prepared towards the end of his life, which was partly published after his death; the collection itself, however, is no longer extant.<sup>49</sup> As to what it once contained, there are two main clues. One is an incomplete list of its contents now in BP 36, fols. 102–11. This gives the titles of just over a thousand recipes, numbered from 501 to 624, 1084 to 1156, 1304 to 1486, 1706 to 2209, 2301 to 2345 and 2380 to 2500, with medicinal and chemical material mixed together in an apparently random order. Typical examples read ‘506 To facilitate the melting of Iron Oar into Mettall’, ‘513 A good Medicin of Sassafras’, ‘1338 To make a Tincture of Gold’, or ‘1353 An easy Remedy to stanch Blood and small wounds’. Some of the recipes in the list were published in Boyle’s *Medicinal Experiments*, but far more were not, and these are now lost.

Further significant evidence concerning the content of this recipe collection is to be found in a set of transcriptions from Boyle’s papers made by an

48 See above, p. 38; *Works*, vol. 14, pp. 339, 341, 345, 352.

49 For the letter, see *Works*, vol. 12, pp. 364–6, and Principe, *Aspiring Adept*, pp. 300–2. For related documents, see *ibid.*, pp. 302–9. For the posthumously published *Medicinal Experiments*, see *Works*, vol. 12, pp. 177–298. There are various loose recipes in the Boyle Papers, and very occasionally these have numbers comparable to those in the list in BP 36, for instance BP 26, fol. 100b, with the number 3358. BP 19, fol. 185, has the title ‘A Booke of Receipts not Medicinall’, but is itself only a fragment.



amanuensis of John Locke shortly after Boyle's death. These transcriptions, which now constitute Bodleian Library MS Locke c. 44, fill about two hundred pages of small script. They were probably made in 1692, when Locke had access to the Boyle manuscripts as one of the three executors appointed to attend to Boyle's chemical papers. They predominantly comprise chemical processes, though some medical recipes also appear. That they are derived from the same collection as that listed in BP 36, fols. 102–11, is shown by the fact that they are comparably numbered, and, where the numbers coincide, the title is often identical (on the other hand, the Locke manuscript covers many numbers missing from the series listed in the Boyle Papers inventory, confirming that that is itself only a fragment of a longer document).<sup>50</sup> Significantly, virtually none of the original materials copied now survives in the Boyle archive. Almost the only substantial surviving item is the letter of George Starkey sent to Boyle in spring 1651, sometimes referred to as his 'Key', and even this was not a complete survival, for whereas the Locke transcription witnesses that the letter was complete c. 1692, the original document now among the Boyle Letters lacks its last third.<sup>51</sup>

Indeed, the disposition of Boyle's chemical papers presents a special problem of its own. Boyle had appointed a set of three executors – John Locke, Edmund Dickinson and Daniel Coxe – to sort his chemical papers. While the three seem to have been unable to complete the task since they lacked 'the key or keys of the Chemical terms, without which they could order nothing' – a reference to Boyle's extensive use of codes – they did have access to the chemical papers and may have helped themselves rather extensively to them.<sup>52</sup> Locke MS c. 44 shows evidence at pp. 110–14 of Locke's attempts to decipher Boyle's codes, and Locke was clearly interested in several of Boyle's processes. One of the striking features of Locke's book of transcriptions is the high proportion of processes dealing with metallic transmutation; indeed, all three of the executors had an interest in transmutation (especially Edmund Dickinson) and papers dealing with this subject would have been of particular

50 Bodleian Library, MS Locke c. 44; for further study of this MS see William R. Newman and Lawrence M. Principe, *Alchemy Tried in the Fire: Starkey, Boyle, and the Fate of Helmontian Chymistry* (Chicago, 2002), ch. 5.

51 BL 6, fols. 99–100v; the complete letter is published in *Correspondence*, vol. 1, pp. 90–103; on this letter, see W.R. Newman, 'Newton's *Clavis* as Starkey's *Key*', *Isis*, 78 (1987), 564–74. For a further case of overlap with a text in the Boyle Papers, see BP 19, fol. 132, and MS Locke c. 44, p. 125. It is perhaps worth noting here that there is surprisingly little overlap between the content of Locke c. 44 and extant workdiaries. Only two examples of this have been found, namely Workdiary 8-3 and p. 195, and Workdiary 34-3 and p. 58, and in both cases discrepancies between the two indicate that a further intermediate version must once have existed.

52 John Warr senior to John Warr junior, 16 July 1692; quoted by Miles in British Library Add. MS 4314, fol. 90. The original of the letter is itself now lost. On Boyle's chemical codes, see L.M. Principe, 'Robert Boyle's Alchemical Secrecy: Codes, Ciphers, and Concealments', *Ambix*, 39 (1992), 63–74.

interest given the secrecy in which such processes were generally held. Boyle's chrysopoetic interests were well known in his own lifetime, and it is likely that his literary remains would have been a target of interest for other aspiring transmuters of metals. Historians have long been aware of Newton's requests to Locke to 'fish out' certain chemical papers of transmutational interest from Boyle's remains.<sup>53</sup> This may have resulted in the loss of Boyle's collection of processes, which the items documented here only partially allow us to reconstruct. The same may also be the case with Boyle's *Dialogue on the Transmutation of Metals*, which seems to have been completed in the 1680s, but the English original of which was lost before Miles received the papers, for he lists only a partial Latin translation and what is probably a fragment of an early draft.<sup>54</sup>

Further losses to the chemical papers may have occurred during Miles' time, for in 1741 some chemical papers were sent to the chemist Peter Shaw for evaluation to see if they were appropriate for the edition. It is unclear whether these were ever returned.<sup>55</sup> Miles himself notes in one of his lists 'What to do with Chemical Pap: Whether examind or no?'<sup>56</sup> From the historian's point of view, if large quantities of papers on transmutation were separated early from the archive, such losses would tend to skew our retrospective evaluations of the amount of time and energy Boyle expended on such endeavours. Moreover, even though Boyle's reputation in the field of chemistry is well established, we might have had considerably more material recording his endeavours in this area.

### Causes for the Losses from Miles' Inventories

As for the more general losses, how far does it seem likely that Miles was responsible for them? Clearly, presented with this massive archive, he was looking for principles on which to exercise selection. In terms of Boyle's correspondence, he seems to have sought to weed out items that he perceived as trivial – begging letters, letters from Boyle's publishers, or ones concerning his landed estates and the like – which are repeatedly marked in his inventories as 'No Worth' or 'NW'. Most, but not all, items so marked in his lists are now lost, indicating that the judgement of 'No Worth' led not only to the dismissal but to the actual discarding of such documents. In addition, there is evidence

53 Isaac Newton to John Locke, and Locke to Newton, 26 January, 16 February, 7 July, 26 July and 2 August 1692, in H.W. Turnbull et al. (eds.), *The Correspondence of Isaac Newton*, 7 vols (Cambridge, 1959–77), vol. 3, pp. 193, 215–19. On Locke and Newton's interests in Boyle's processes, see Principe, *Aspiring Adept*, pp. 175–9.

54 See Principe, *Aspiring Adept*, pp. 223–95, esp. 230–1. See above, p. 84.

55 See above, p. 27.

56 BP 36, fol. 167.

of a slightly more sinister motive, of protecting Boyle's reputation, and it seems unlikely to be coincidental that the bulk of the lengthy correspondences between Boyle and such known alchemical practitioners as Christopher Kirkby and John Matson, or with such 'enthusiasts' as the elusive John Kinge or the Quaker Benjamin Furly have disappeared. (The difficulty that Miles encountered in reading French probably protected the crucial letters from Georges Pierre and associated items for posterity.) Censorship is also clearly in evidence in connection with the profuse records that evidently once existed of Boyle's casuistical interests, which Miles appears to have jettisoned since they were 'not suited to the genius of the present age &c'.<sup>57</sup>

With the Boyle Papers, however, conscious censorship seems on the whole to be less in evidence than is the case with the correspondence. It is true that certain items which might have seemed to smack of credulity are no longer extant, such as 'Brevis consignatio Visionum Nocturnarum Steph: Melisch (Pragensis Bohemus) anno 1655', while it might have seemed likely that Miles would be ready to jettison papers about oddities, such as a 'Story of Speaking Trumpets finding out a leak in a Ship', or an 'Account of a Boy growing man Suddenly'.<sup>58</sup> On the other hand, Miles seems to have been quite intrigued by the material on second sight and related phenomena intended for the second part of 'Strange Reports', which Boyle himself had thought better of publishing.<sup>59</sup> Also, though much material concerning magical or alchemical phenomena has disappeared, far more of the losses involve texts on such topics as matter theory, or programmatic statements on natural philosophy, that Miles is hardly likely to have disapproved of.

What seems likelier is that Miles may have disposed of items owing to having made incorrect presumptions as to whether they were original materials or derivative copies. Clearly, Miles was hoping to reduce the overall bulk of the deposit by discarding material. Evidently, he hoped to identify and jettison documents that duplicated material elsewhere in the archive because it had been either recopied or printed. In particular, he seems to have presumed that material crossed through was extant in some other form. Thus one of his memoranda on BP 36, fol. 149, is: 'many Papers XX I suppose publishd', while on fol. 167 he notes: 'Q whether Papers said to be transcribd are useless or whether printed?' In the former supposition, he was almost certainly mistaken, since some of the most significant material published for the first time from manuscripts in volumes 13 and 14 of *The Works of Robert Boyle* survives only in crossed-through form. The fact that these items are crossed through does seem to imply that they were transcribed into fairer copies during Boyle's lifetime, but in most cases, these putative fair copies seem not to have survived

57 See Hunter, *Scrupulosity and Science*, pp. 77–8, 263. For the correspondence, see *ibid.*, pp. 265–6, and *Correspondence*, vol. 1, pp. xxviff. and *passim*.

58 See appendix 1, bundles 'Q' and 'B.a.'

59 See Hunter, *Scrupulosity and Science*, pp. 223ff.



even down to Miles' time, and the result was that Miles discarded the only surviving versions.

In addition, and unsurprisingly, Miles was especially interested in writings by Boyle, and material identifiable as being by other people was clearly perceived as peripheral and implicitly dispensable: this is made particularly clear by the fact that all such material is omitted from the first abstract he made from his original 'List of Titles' in BP 36, fol. 146. It was evidently according to such criteria that he deemed items in the Boyle Papers, as in the Boyle Letters, 'No Worth': in his memorandum in BP 36, fol. 149, he thus refers to 'Another parcell of useless Papers bundled up and mark'd thus N.W.'.

At the other extreme, it seems likely that further losses were due, not to an undervaluing of material on Miles' part, but to his valuing it highly enough to consider its publication. As he was sorting this material – and particularly the earlier group represented by the 'List of Papers' – the Birch edition was just going to press, and it seems almost certain that some material was forwarded to Birch to be considered for inclusion, as specified in the agreement between the two men cited above. Some of Miles' memoranda suggest that he hoped that unpublished material might be annexed to the published work to which it was relevant. For instance, one of his memoranda states: 'Q whether [bundle] I containing some occas: reflect: may not be added to the Book on that subject', in other words, Boyle's *Occasional Reflections*.<sup>60</sup> Similarly, concerning *Experimenta et Observationes Physicae*, his memoranda in BP 36, fol. 146, are as follows: 'papers belong. to Observat. Phys not in it NB. to go to be printed as addit. to that book',<sup>61</sup> and 'Extraord. reports to go to be printed with the rest on that Subj. 2 p.' In other cases, he may have felt that whole, yet unpublished, treatises were worthy of inclusion, as with his note in BP 36, fol. 167v, quoted on p. 79 above. These more or less completed texts are the sorts of items enumerated in the first list which Miles tended to remove to the 'ADDITIONS' file already mentioned, and in fact most of the items so marked are now lost. Likewise in the second list, the 'List of Titles', even though he did not mark items as 'ADD', everything that seemed to have comprised completed essays or treatises has been lost – for instance, the further essays to *Usefulness* (111 pages), 'Of the Concealment and Disguises of Seeds' (54 pages), 'Of Seminal Principles', and so forth. Thus we have the unfortunate result that not only ancillary items, but also the most polished pieces of Boyle's own composition, were separated from the archive in the 1740s and subsequently lost.

It is quite possible that a significant amount of this material was sent to Birch, and then was discarded in the rushed final stages of the preparation of the edition, or at least failed to be reunited with the rest of the papers. As it was, as we have seen, it was only Miles' additions to *Christian Virtuoso* which actually

60 BP 36, fol. 168.

61 He also wrote: 'preface to appendix. NB this is with the last [page torn] first within 4 or 5 of ...'.

got into print, and the manuscripts relating to that work have themselves mostly disappeared (as is also the case with a high percentage of the letters included in the Birch edition, the manuscripts of which may have been regarded as dispensable once printed).<sup>62</sup>

On balance, therefore, maladministration rather than malice seems to blame for most of the losses to the Papers documented here. Conscious manipulation in an attempt to safeguard the reputation of a great scientist seems to be less in evidence than in the case either of Boyle's own correspondence, or of the manuscript remains of certain of his peers which were sifted by or for posterity in the aftermath of their death, as notoriously with the Newton Manuscripts in the nineteenth century.<sup>63</sup> Yet this does nothing to reduce the seriousness of the loss, or the tantalising nature of the brief references that appear in the lists that follow. If we still had the extensive papers recorded below, we would have far more of such seminal treatises as the 'Dialogues on Heat and Flame' or the 'Essay on Spontaneous Generation' of which only fragments are printed in volume 13 of the new edition of *The Works*, not to mention entire lost treatises, some of which we have already itemised. Of course, the Boyle archive might never have survived at all: but it is hard not to be wistful about the fact that, as tantalisingly documented here, we might have had so much more.

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62 See *Works*, vol. 12, p. li; *Correspondence*, vol. 1, p. xxvi. This was also true of the MS from which Boyle's *Customary Swearing* was posthumously published in 1695: see *Works*, vol. 12, pp. xxxvii–xxxviii.

63 See various essays in Michael Hunter (ed.), *Archives of the Scientific Revolution* (Woodbridge, 1998), especially those of Joella Yoder and Rob Iliffe.

## Appendix 1

### Miles' 'List of Papers' (BP 36, fols. 157–60)

[BP 36, fol. 157]

List of Papers markt

A.

Propagation of Gospel in NE.  
Charter.

Probably either BP 4, fols. 123–6, or  
BP 40, fols. 145–7

B.

half sheets (of Bacons writing)  
Relations –Magnetism of Earth. /

BP 21, pp. 155ff. [though these are not  
half-sheets]. See *Works*, vol. 14, pp.  
121ff.

C.

Copies of letters of Mr B. to his  
sisters &c

Probably the moral epistles in BL 1 and  
BP 37 printed in *Works*, vol. 13,  
pp. 43ff.

this & W. go together. /

D.

Diary of his life.

Lost, unless this relates to Boyle's  
workdiaries

E

of Mines — Flowers without seed  
raisd.

Boyle's 'Articles of Inquiry' (*Works*,  
vol. 5, pp. xxxv, 529ff. The latter is  
identified by Miles as 'a piece of  
paper' in BP 36, fol. 149: it is  
apparently lost.



De Respiratione Folio	BP 36, fol. 149, has 'De Respiratione Experim: Pneumatica nova Lat:', i.e. Latin translation of 1670 <i>Phil. Trans.</i> article; but only a fragment survives. See <i>Works</i> , vol. 6, p. xxxiv
De admod: difficili Propagatione actualis Flammæ in Vacuo Boyl. Fol.	Presumably BP 34, pp. 353ff., although that is a quarto
– Second Sight.	Probably BP 39, fols. 216–17
Papers presented to the K.C. 2 <sup>d</sup> . by Reynolds Baxter in Mr Oldenburghs hand. Fol.	Lost. Evidently papers by the moderate Puritan Edward Reynolds (1599–1676) and the Presbyterian Richard Baxter (1615–91) relating to the 1661 Savoy Conference, aimed at reconciling the differences between Anglicans and Puritans
–Another Entit. on outside Fire & Flame thick. being Dialogue betw. Carneades &c. in ADD:	Lost; only fragments of the treatise remain: see <i>Works</i> , vol. 13, pp. 259ff.
– Loose papers on Various Subjects not XXX. * Q. whether <u>not to be examind or no</u> I think they ought	?  ?
–Noctiluca & abundance of loose papers.	Mostly lost; hardly any MS material relating to <i>Aerial</i> and <i>Icy Noctiluca</i> is extant: see <i>Works</i> , vol. 9, p. xxiv
1 <u>Essay of Inquiry into Vulg. re. Notion of Nature</u> [endorsed in margin: printed, and cross put through text]	Lost; Miles' memo at BP 36, fol. 149, clearly describes this item as '1st Section'; see also Hunter and Davis, 'The Making of Boyle's <i>Free Inquiry</i> ' (below, ch. 5)
–Propos. for setting Poor on work. <i>Examine</i>	Lost
–Catal. of Mr B's. Books & Pamphlets: not of his Works but his Library.	Lost

## F.

Copper plate Sun dials –

See BP 35, fols. 201, 219

## G

– Papers designd to be put into the  
Bp of Salisburys hands.Probably Sir Peter Pett's notes and  
ancillary items: see Hunter, *Boyle by  
Himself and his Friends*, pp. 58ff.

## H.

Treatise of Experiments of Spring &  
weight of air 1682Lost; presumably a MS English version  
of *Spring, 2nd Continuation*

## I

Theolog: Papers –  
Reflections on Script. Occas. Medit.Probably BP 7, fols. 128ff. and BP 14,  
fols. 1ff.: see *Works*, vol. 13, pp. 99ff.Self Conversat. many other Subj.  
deserving to be Considerd – all not  
printed perhaps Q. [bracketed  
together and endorsed in margin:  
removd to ADD all]Probably BP 7, fol. 291, etc.: *Works*,  
vol. 13, pp. 126ff.

## K

a thick 4<sup>to</sup> Mr Oldenb: writing  
containing various Subj.

Much of BP 43

Excerpta ex Repub: Eccles:  
Archiep. Spalatensis  
Marci Anton. de Dom: Dalmatiae et  
Croatiae &c

BP 43, fols. 1–154

—Notabilia quædam, de Romana  
Ecclesia —Collegium privatum  
Anti-judaicum habitum ultraj: sub  
D. Gisb. Voetio cœptum d.12 Sept.  
1641

Ibid., fols. 155–212

–Ex Varenii Geogr. quædam Excerptæ &c	Ibid., fols. 213–17
Raisons contra [sic] la Paix de Holland:	Ibid., fols. 236–59
–Methodus Legendi Historias & <u>some others</u> omitted	Ibid., fols. 260–9
–Leicester coming into Low Countries	Ibid., fols. 270–9
–Fortification	Ibid., fols. 280–3
–Annotations French	
[fol. 157v]	Ibid., fols. 283–9
–Simpson & Justice Heyland discourses on some texts of Script. against the Triers at Whitehall &c.	Ibid., fols. 290–7
–K Ch: declaration & Concessions at Holdenby 1647	Ibid., fols. 298–300
–Epitome Genealogiæ Regum Angliæ–	Ibid., fols. 302–22
–Considerat. on Deut. 18: 9–21. Exam:	Ibid., fols. 333–6
De mirabilibus Pecci Carmen  Hobbesii	Ibid., fols. 337–45
–Richelieu Cardinal. Synopsis Vitæ	Ibid., fols. 346–8
—Propos: <u>For</u> advancement of Morality by a new way of entertainment of the people.	Ibid., fols. 350–64
– a Fr. Tract. not very legible <u>in</u> title <u>page</u> to me	Ibid., fols. 367–96



## L

on atomical Philos. papers to be rifled & burnt & again these without faile to be burnt. – BP 26, fols. 162–75; *Works*, vol. 13, pp. 225ff.

## M

Promiscuous thôts 1653 & others all being NW but all sowed together though of different things [in margin: in ADD] Lost: cf. bundle Ka

Promiscuous observat. Private Philos. Diary 1655/6 [in margin: In ADD] BP 25, pp. 157ff. (Workdiary 14)

– B Worsleys Receipt for tooth ach Perhaps BP 28, pp. 309–12 (Workdiary 6)

Rx Mithridatii & «philonii» Romani ana q.s. palmæ magnitudine & aplicetur lateri dolenti taken oft when pain ceases A prescription: lost

–Archimedes de Sphæra & Cylindro with a Letter of Mr Robt Wood – Q.Q. BP 25, pp. 145–50

–Paper of Worms seen in Vinegar Probably lost, although conceivably BP 26, fols. 109–10, or the MS of the text published in *Usefulness*, *Works*, vol. 3, pp. 227–8; see also vol. 2, p. 79

Queries propound: to R. Society [in margin: In ADD] Perhaps BP 37, fols. 134–5

## N.

an act to remove Discouragements to Conversion of Infidels BP 3, fols. 161–4 or BP 4, fols. 145–7

–Commission & Instructions for Comittee of Foreign plantations BP 39, fols. 202ff.

- two Papers concerning the Lecture now at Bow Ch. *perhaps* N.W. BP 4, fols. 166, 179–81
  
- Goodwins account of Relig: in Plantat: at the Instance of some members of the H. Commons BP 3, fols. 127–34
  
- part of the Patent for Propagat. Gospel in N.E. &c BP 40, fol. 145
  
- Abstract of Charter of Incorpor. for Propag. Gospel in N.E. 1661 1st Governor Mr B. See above, bundle A
  
- Debate before Committee of H. Lords about Interest of Money BP 40, fols. 60–8
  
- Clause in Companys Letter to St Helena concerning Negroes Educat. BP 4, fol. 144
  
- Abstract of patent of Corpor. for N Engl. See above, this bundle and bundle A
  
- Petition of Company for propag: gospel in N. England to the K. Perhaps BP 40, fol. 9
  
- NB additions to N– see Last leaf [in margin, written sideways: add to N. a bundle of Papers of propogat: gosp. printing Bible in Divers Languages Case Non Con. Ministers in Wales] Probably BP 4, fols. 102ff., inc. fol. 117 (dissenting ministers in Wales)
  
- O
  
- Articles of Inquiry about Nat. Hist. of a Country in a Case – No 5. See my Pap: of Queries to Mess: Ward &c [in margin: This removd *to ADD*] See BP 8, fol. 205; BP 26, fols. 48ff. For the paper of queries see BP 36, fol. 167.

- A Folio Book of promiscuous Experiments Observations & notes  
– many transcribd. Mark'd AA BP 27 (Workdiary 21)
- Promiscuous addenda to his Severall Treatises Folio [in margin: \* \* \* NB at beginning a list of order of his writings – to be considerd] BP 8, fols. 63ff. (Workdiary 22) , inc. 'The Order of My Severall Treatises' (see *Works*, vol. 14, pp. 331–2)
- a few Leaves I think Italian & a paper at the end in Engl. Q: the existence of Barnacles Probably BP 17, fols. 142–6
- Thoughts & observat. about Generation of Minerals to be annexed to History of Fluidity. Q. if printed [in margin: \* Not printed – is now with Physiolog. Essays to which it belongs. since in ADD <Mem: inquire if this be in that Book now in Mr Birch's hands>] BP 24, pp. 1–15: see *Works*, vol. 13, pp. 365ff.
- Objections against Funicular Hypoth: of Linus 1661  
    sign'd H. Power. BP 29, fols. 147–50
- Receipts belonging to various matters not properly Chem: or medicinal – making Severall wines – Ink for rolling press communicated by Mr Evelyn in a Case markt T. BP 27, pp. 275ff.  
BP 27, pp. 293–4
- [fol. 158]
- P.
- phys: Receipts. Chem Papers. NW. Possibly a workdiary. The draft in BP 26, fol. 84, specifies that it was 'the latter' which were 'NW'.
- de generat & transmut. Metall. Folio BP 25, pp. 185–215: see Principe, *Aspiring Adept*, pp. 238ff.



–more Chem: Pap: Dialogue wise <u>between</u> Carneades Eleutherius & others. Q. if printed [in margin: added to ADDIT to be examind]	Partly lost; the extant fragments are printed in <i>Works</i> , vol. 13, pp. 259ff. Miles' draft in BP 26, fol. 84, adds 'imperfect' after 'Chem: papers'.
– add the Requisites of a good Hypoth: freely Considerd by Carneades &c tho' XXX	ditto
Q	
Catalogue of Curiosities in a Journey thro' Staffordshire	Lost
–Experiments about Air in Fermentation	Possibly relating to <i>Spring, 2nd Continuation</i> : see <i>Works</i> , vol. 9, pp. 121ff. For a single fragment of MS, see BP 29, p. 195.
– paper belong: to History Flame [in margin: in ADD]	See above, bundle E
– a paper concern: the method of Cure of Distemp.	Possibly MS version of part of <i>Usefulness</i> , II, sect. 1: see <i>Works</i> , vol. 3, pp. xxiii–xxiv
–account of attempt to discover Cape Faire & S. parts of Florida	See also below, p. 98. Lost
–Experiments proposd to be tryd on the top of a high Mountain	?
–Excerpta ex Goropii Becani libri qui inscribitur Niloscopium	Lost. An unidentified book by the savant Jean Becan, or Gorophinus Beccanus (1518–72)
–Dr Pascals experiment of [mercury] tryd and augmented by H. Power May 2d 1653 [sic]	Lost
–How to keep Gooseberries &c all the year	?

- proposals about Cape Faire                      See above, p. 97
  
- description of Sweden Poland  
Russia old handwriting hardly legible/                      Lost
  
- Brevis consignatio Visionum  
Nocturnarum Steph: Melisch  
(Pragensis Bohemus) anno 1655.                      Lost. Published in 1659 as *Visiones nocturnæ Stephani Melisch*; an English translation by A.O. Faber appeared in 1663
  
- of Cold & of Cellars &c: I think  
this is printed but tis not XXX                      Lost; possibly as published in *Works*, vol. 6, pp. 327–9
  
- a paper of few Experiments  
propounded to be tryd some in air  
pump.                      Possibly BP 10, fol. 118
  
- Memoranda or hints many of 'em  
transcribd, others to be applyd to his  
severall Books not much value                      Probably a workdiary, but it is not clear which
  
- of Validity of Ordination of  
reformed Ch: signd Ireneus.                      Lost
  
- Bp Lincoln (Barlow) against Popery  
being an answer to a Book printed  
here 1684 intitled the prodigal returnd  
home.  
2 copies are transcribd by Bacon –                      BP 7, fols. 216–32
  
- Trimmer* – Q. R To Inquire                      Lost: presumably Halifax's *Character*
  
- paper of Relations about Iron  
mines not XX  
Bacons halfsheets & 2 more                      Lost
  
- R
  
- 3 recipes not to be printed –                      ?
  
- Mr Winthrops Letter about  
Husbandry in N Engl.                      Probably letter with enclosure about corn: *Correspondence*, vol. 2, pp. 31 ff.

–Philos: Diary 1654/5 look in this Index for another	Probably BP 8, fols. 140–8: i.e. Workdiary 12
–3 Tracts <sup>64</sup> of Diseases & Rem: Lat. uncertain who the author.	Lost
– a paper of a Phænom: like fire near Sun at setting	Lost
– a sheet of Bacons Lat: entit: Oratio p.56	BP 28, pp. 297–9
–Memorand: of Experiments to be try'd	Possibly BP 10, fol. 118, or BP 9, fol. 83
–Materials for Paralipimena [sic] of his writings only heads	BP 25, pp. 217ff., or BP 35–6, passim
–short notes & Snips of Paper belonging to V. of A. so superscribd.	BP 4, fols. 4ff. (so inscribed)
– * of Compiling Nat. History – to H.O. Esqr. see additions to R. last leaf [in margin: in ADD]	Probably BP 25, pp. 1ff.: see <i>Correspondence</i> , vol. 3, pp. 170ff.
[fol. 158v]	
S	
old collection of notes out of printed Books <u>not much worth</u>	Perhaps BP 8, fols. 92ff. (Workdiary 22, part 2) (but see above, p. 96)
T	
*Papers in a pocket of the 3d & 4th Confer: belonging to Christian Virtuoso 2 <sup>d</sup> part	Manuscripts lost: see <i>Works</i> , vol. 12, pp. xlixff.
←heads belonging to 2 <sup>d</sup> part Christian Virtuoso→	Ibid.: in this case the original is probably BP 5, fol. 93

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64 Altered from something else: 'me' [?].



- of the Idea of a being infinitely perfect. BP 7, fols. 247–52
- Prefaces Introductions & some hints to be inserted in his books Cf. *Works*, vol. 14, p. 353
- another markt A.10. of Truth & Excell. of Christian Relig. &c Perhaps BP 3, fols. 84ff., or BP 4, fols. 60ff.
- Some Theolog: notes & papers transcribd Perhaps BP 5, fols. 25–7, 30, 40
- about Conversion of Infidels, Mr Eliots Letter Either BP 11, fols. 279–84, or one of Eliot's letters: see *Correspondence*, passim
- On Miracles, some papers of Mons. Renaudot, Analysis on Ep: to Heb. Lat. For extant papers on miracles, see esp. R.L. Colie, 'Spinoza in England, 1665–1730', *Proceedings of the American Philosophical Society*, 107 (1963), 183–219. The second item is lost: it perhaps refers to Jean Renaudsot (d. 1690), Huguenot minister: see *Correspondence*, vol. 6, pp. 287–8. For the third item see BP 7, fols. 294–6.
- a 4to black strings Theolog. most XXX Probably lost
- a paper of Bacons hand which belongs perhaps to the Christian Virtuoso See *Works*, vol. 12, pp. xlixff.
- V
- account of Virginia – Q. whether printed. BP 39, fols. 95–181
- Marrow of Philosophy by George Ripley Canon of Bridlington compiled 1476. copied by Thomas Potter 1580. the secrets of Alchimy BP 30, pp. 1–52

- Adepti Michaelis Sendivogii  
Epistolæ Philosophicæ ad Sodalem  
anno 1646. a fair copy. BP 31, pp. 394–554, or BP 34,  
pp. 238–323
- a paper of the numerousnes of  
Mrs Blany’s Relations – Bacon BP 37, fol. 118
- Le Philosophe Duppe, Comedie BP 42, fols. 155–82
- a paper of Bacons hand on sight  
lament: that physic: do not make it  
more their Study to cure distemp:  
Eyes Probably BP 18, fol. 66
- the 14th Booke of John Jovian  
pontanus Concerning Celestial things  
dedicated to Paulus astrological<sup>65</sup> Lost; part of J.J. Pontanus, *De rebus  
coelestibus* (1519)
- penseés detacheée [sic] L’imitation  
de celles de Mr Paschal &c BP 42, fols. 1–79
- two Imperfect half sheets I know  
not the hand– one about metals Tin &  
Lead other refer to some Experiments  
on a Viper. The latter perhaps BP 10, fol. 15: see  
*Works*, vol. 6, p. xxxvii
- two or 3 more of half sheets of  
notion of nature & others Theolog.  
uncertain what particular Subject. See Hunter and Davis, ‘Making of  
*Notion of Nature*’ (below, ch. 5)
- papers in a small Illegible hand. ?

W

[in margin: is with C but in a sep: Bundle.]

- <sup>66</sup>Papers of Mr Boyles own Writing  
Letters & Epistolary Dissertations Possibly the items from BL 1 and BP  
37 in *Works*, vol. 13, pp. 43ff.
- about the Duty of a Mother to  
Suckle her own Child BP 37, fols. 196–202: see *Works*, vol.  
13, pp. 65ff.

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<sup>65</sup> Followed by ‘Books’ smudged and probably intended for deletion.

<sup>66</sup> Preceded by ‘notes’ deleted.

–Letter to a mother on the Death of her Daughter      Lost

## X

a paper Mr B.s hand Imperfect  
on Style of Scriptures

Possibly BP 3, fols. 91–2: printed in *Works*, vol. 13, pp. 117–19; cf. bundles Ca and Ha

—another Bacons transcribd but worthy to be kept because some things relat. to paralipom: mentiond in it<sup>67</sup>

Perhaps BP 25, pp. 217ff., but see above, p. 99

–Exhort. to Rom. Cath. to read Script. *uncertain author*

Perhaps the preface to the edition of the Irish New Testament sponsored by Boyle and published in 1681: see BP 4, fols. 108–11

–Concerning Script. qualif. to explain it *imperfect*      Lost

–two or 3 sheets of usefulness  
Philos: – *imperfect*

See *Works*, vol. 3, pp. xxiiff.; vol. 6, pp. livff.

–a sheet Bacons hand being a sort of Ep: to some Gent: who had informed Mr B. of exceptions made to his Book of Colours

Lost

X is continued in another paper

[fol. 159]

## Y

– a Conference wherein tis inquired In what Sense the Christian Religion may be said to be, & in what Sense not Contrary to Reason. seems finishd– to be examin'd

Lost; now extant only in Latin: see next item

67 Followed by deleted entry: ‘–Confer: about Christian Religion what sense c[ontrary] to Reason &c. imperfect’.

- same in Latin BP 6, fols. 49–77; *Works*, vol. 14, pp. 173ff.
  
- de diversitate Religionum & another de rebus rationem transcendentibus BP 6, fols. 1–48, 279–91; *Works*, vol. 14, pp. 235ff.
  
- X  
Continued because I woud not multiply Nos
  
- Preface to some Treatise of his on Scripture or on Christianity – may be found by Examining. Perhaps the text from BP 5 printed in *Works*, vol. 14, pp. 277ff.
  
- a few notes on Final Causes Perhaps BP 9, fols. 35–41: see *Works*, vol. 14, pp. 165ff.
  
- Snips one about Experiments suggested by Mr B. in Mr Oldenb. hand. ?
  
- Scraps 1 of Miracles – another a note of advantage of A Virtuoso. Q. if not belong to 2<sup>d</sup> part Christian Virtuoso See *Works*, vol. 12, pp. liiff.
  
- a Rx for Cement Lost; possibly the ‘Cement against Fire & Water’ listed in the 1650s catalogue of Boyle’s writings in *Works*, vol. 14, p. 330
  
- 1 propos: that Experim: Know. of Gods Wisdom & discovery in his Works is a great help to rationaly [sic] piety & Devotion ?
  
- An account from N. Castle of Slate &c one of the same before BP 26, fol. 77, published in *Correspondence*, vol. 6, pp. 176–7
  
- \* a short note belong: to Conference about Christian Religion See *Works*, vol. 12, pp. xlixff.





Z

–Apology for Romances Mr Bs own hand      Lost; see Principe, ‘Virtuous Romance’, pp. 380–1

[fol. 159v]

A a

Tract on Cyder      BP 29, fols. 151–82

B.a.

–Copy of a Letter about Experiments in Air pump      Probably BP 26, fols. 205–6

–Story of Speaking Trumpets finding out a leak in a Ship      Lost

–Heads Experiments on cold      Probably BP 36, fol. 94

–Scheme Christian Virtuoso      ?

–Discourse of Nat Hist. of Denmark (incerti autoris) read before the RS. Q. if printed.      BP copy lost; probably by Thomas Henshaw: see Birch, *Royal Society*, vol. 3, pp. 181–9

–Comet December 1680      Lost; see above, bundle X

–Poveys Secret in Painting read before RS.      BP copy lost, but see Birch, *Royal Society*, vol. 2, pp. 227–31

–German Artists shin: substance<sup>69</sup>      Possibly a text by G.C. Kirchmeyer or Johann Kunckel. Lost

–appendix to it.      ditto

–of a Monte di pietà in order to establ. one in London      Lost; these institutions, sometimes called banks of charity, were intended to provide loans to the poor; in 1663, a commission was issued to the Earl of

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<sup>69</sup> Followed by ‘added to it’ [?] deleted.

- Bristol to erect them in London and elsewhere, although nothing came of this: see *Calendar of State Papers Domestic* [CSPD] 1663–4, p. 61
- Gold extracted out of sand in the River Gambia ?
- Experiments Torricellian by Dr Power Townley &c Lost
- account of a Boy growing man Suddenly. ?
- Ecloga de ruina Chatsworthi Basilicæ &c writing is Mr Oldenb. Lost
- Extract from Acosta, vomiting caused by ascending an High Mountain in Peru Lost, but cited in *Spring of the Air, Works*, vol. 1, p. 285
- Ks Letter to Judges about Shipping 1636 & Judges opinion BP copy lost; evidently a copy of Charles I's letter to the judges of the three common law courts of Westminster concerning the legality of ship money and their reply: *CSPD* 1636–7, pp. 416–18
- difference betw. mans Brain & other Animals. Lost
- account Journey to P. Teneriffe Lost in MS; printed in *General History of Air, Works*, vol. 12, pp. 115ff.
- Copia Mr De Wit on Surinam Affair July 2 1669 BP copy lost; this paper by Johan de Witt (1625–72), grand pensionary of Holland, concerned the negotiations over the transfer of Surinam to the Dutch under the terms of the Treaty of Breda: see *Calendar of State Papers Colonial* 1669–74, p. 29

–account Variation in Voyage to <sup>70</sup> Bantam from Engl.	Lost
–design Advancement Learning in Ireland	Lost; possibly a document concerning the schools founded in Ireland by Sir Erasmus Smith (1611–91)
–Pr Ruperts account Seafight	Lost; possibly a copy of Prince Rupert's letters describing the battles of Schoonveld in 1673: see R.C. Anderson (ed.), <i>Journals and Narratives of the Third Dutch War</i> , Naval Record Society, 86 (1946), 387–9
–Worcester of a Water engine to the King	Lost; probably an account of the 'water-commanding engine' erected at Vauxhall by the 2nd Marquis of Worcester (1601–67)
–Comet seen at Batavia in E Indies 1664.	Lost; the comet of 1664–5: see <i>Correspondence</i> , vol. 2, pp. 482–3; vol. 3, p. 223
–Copy Prances Examination.	Lost; Miles Prance was a Catholic whose evidence, later withdrawn, led to the execution of three men for the murder of Sir Edmund Berry Godfrey (see below, p. 109)
–advertisement of Mr Bs. concern: one of his books of Experiments.	Possibly Boyle's printed <i>Advertisement</i> (1688): <i>Works</i> , vol. 11, pp. 169–71
–Icon Herbæ Dudaim	Lost
–account Bombay.	Lost
–anatom Experiments propounded to be made.	Probably BP 18, fols. 129–30

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70 Altered from 'from'.



## C a

- Some Theolog: Pap: seem to belong to Christian Virtuoso [in margin: In ADD] See *Works*, vol. 11, pp. xlviff.; vol. 12, pp. xlixff.
- a Philosoph Sheet Entit Essay XIII. [in margin: In ADD] Part of unpublished *Usefulness*: see *Works*, vol. 6, pp. lvii–lviii; vol. 13, pp. liv–lvi and 350ff.
- A Latin Tract entitled Introductio ad soluta Theologica nostra adversaria. BP 2, fols. 191–8: see *Works*, vol. 14, pp. 277ff.
- Loci Communes<sup>71</sup> Grotius N.W. being from Grotius de Veritate as I imagine but have not compared them BP 37, fols. 209–14
- another Tract imperfect seems to belong to Stile of Scriptures, but Q. whether printed. [in margin: In ADD] Possibly the manuscript (now lost) printed by Birch in his *Life*, see *Works*, vol. 12, pp. 355–8. However, see below, bundle Ha, and above, bundle X
- [fol. 160]

## D.a

- Some Occasional Papers BP 37, fols. 166–7; *Works*, vol. 13, pp. 141–4
- 1 Begin: Come dear Philosophy &c BP 37, fols. 160–3; *Works*, vol. 13, pp. 135–8
- 2 The Gentleman [entries bracketed together and endorsed in margin: In ADD]

## E.a

- Two Rolls a Treatise on Music by Birchensa for Mr Boyle another by Dr Wallis on the same subj. Q whether not valuable BP 41, fols. 1–21, 22v–31
- the other part of a Tract of Nat. Philos. Q. whether not DesCartes? Perhaps BP 24, pp. 223ff.

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71 Followed by ‘not perfected’ deleted.

F.a

D. Buckinghams Entertainments in France

Lost; probably an account of the visit of the 2nd Duke of Buckingham (1628–87) to Versailles in July 1670 in preparation for the Third Dutch War

Dugdales Papers and others about Sir E. Godfreys murther<sup>72</sup>

Lost; Stephen Dugdale (c. 1640–83) was a former steward to Lord Aston, a Staffordshire Catholic landowner, at whose house he alleged that the murder of Sir Edmund Berry Godfrey (1621–78), the JP to whom Titus Oates divulged the ‘Popish Plot’, had been planned

G.a

Letters of State prisoners under Condemnat.  
uncertain from whom they came

Cf. BP 41, fols. 119–22: but this concerns only one figure

–Defences of the accusd.

Lost

–Elector Brandenburgs Edict inviting Protest: into his Dominion

BP 4, fols. 150–2

–of Lord Clarendons Impeachment

BP 40, fols. 6–8

H a

Essay on the holy Scriptures.

BP 7, fols. 1–94; *Works*, vol. 13, pp. 173ff.

I a

Mr Nelsons Queries to Mr B. on his Treatise of the Vulgar Notion of Nature  
*fair: & correct*

Either the same as or related to Nelson’s lost letter on this topic of 1686: see *Correspondence*, vol. 6, p. 155

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<sup>72</sup> ‘m’ in ‘murther’ altered from ‘D’.

Additions to N. & R.  
to N.

- of converting blacks in Barbad.                      Perhaps BP 4, fols. 127–8
  - act to remove discouragements to  
conversion Infidels another cop[y]                      Probably BP 4, fols. 118–20 or 145–7;  
see above, bundle N
  - Elench: Libror sive typis sive  
impensis S. Congr. de fide propag.  
impressiorum &c.                      That is, the *Index*. No copy in BP
  - Seamans proposal about propag.  
gosp. in Turkish Emp.                      Lost, unless Miles misread Seaman's  
proposal for his lexicon, BP 4,  
fols. 148–9
  - Case Corpor. of N.E.                      Probably BP 4, fol. 122
  - Improvements in Ireland                      Perhaps BP 40, fols. 143–4
  - of propag. gospel in India                      Lost, unless it or one of the two  
following items is BP 11, fols. 277–8
  - another on ditto                      Ditto
  - proposals for the same                      Ditto
  - paper relat. to Chart. NE                      See above, bundles A and N
  - Profess: of faith of Revolted  
Protest. in France                      Lost
- Additions to R
- Requisites to good Hypoth.                      BP 35, fol. 202, BP 36, fols. 57–8, or  
BP 37, fol. 121. See *Works*, vol. 14, pp.  
359–60; see also above, bundle P
  - account Virginia                      See above, p. 100
- [fol. 160v]
- \*on Transmutat Lead into Gold                      Probably BP 8, fols. 160–4: see  
Principe, *Aspiring Adept*, pp. 264ff.

– a paper belong: to one of his Treatises addressd to Pyroph.	Lost? A 1650s fragment, the exact nature of which is unclear
– Titles of nat: & exper history of air [in margin: <u>in</u> ADD]	Various versions extant: see <i>Works</i> , vol. 12, pp. xiff.
–Reflect: on State affairs in Poland Turkey &c	BP 40, fols. 148–51
In a Pocket asunder Markt A.5.	
–Final causes.	For extant manuscripts, see <i>Works</i> , vol. 11, pp. xvi–xix
–1 Probatory Experiments	BP 9, fol. 52
–2 Exploratory experiments	BP 9, fols. 118–19
–3 Metrical experiments	BP 9, fol. 120
– a paper about Slate in the Coal pits of N.Castle	See above, bundle X
–Syrupus contra Calculum	BP 19, fol. 132
a pocket of Papers relating as I imagine to Christian Virtuoso [in margin: In ADD]	See above, bundle Ca
–a paper relat: to diversities of Religions	Lost; for Latin version, see above, bundle Y
–Media ad Scripturas intelligendum [sic]	Lost
–Relation of Gentlemans Skull being broken (half sheet Bacon)	Probably BP 17, fols. 114–15; see <i>Works</i> , vol. 11, p. lv
–Letters to some Ladies against Painting	BP 37, fols. 204–8; <i>Works</i> , vol. 13, pp. 49ff.

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K.a.

- a list of severall Boxes of MSS. One of the inventories in BP 36:  
*Works*, vol. 14, pp. 327ff.
- an Essay on the various degrees of the knowledge of natural things. BP 8, fols. 165ff.  
Mr Boyles Autogr.
- a few lines against Lucretius See above, bundle X  
Argument Bacons hand
- a few Philosoph. loose papers not likely to be made use of — ?
- Specimens hands in a bundle
- a Letter of Mr Warr Senior to his son 1692 by which it appears that some Physicians examin'd the Chemical Papers of Mr Boyle so soon as that [marked \* in margin] Lost; see Maddison, 'A Summary', p. 100
- Theolog: loose papers little Consequence ?
- a scrap of a stone taken out of a mans Navel *from Capt Smith* Lost
- a paper of Mr Boyles sign'd with his name concerning his design in Chemical Experiments to be inserted in life [marked \*] BL 1, fols. 107–8 and 130–1; see Principe, *Aspiring Adept*, pp. 300–2, and *Works*, vol. 12, pp. 364–6
- a paper of subterraneous heats & of mines imperfect Mr Bs *autogr.* Perhaps BP 21, pp. 87ff. (but not in Boyle's hand); see *Works*, vol. 13, pp. 403ff.
- a Key to Cypher Letters what Numbers in fig: sta[nd] for Possibly BP 41, fols. 104ff.
- promiscuous Thoughts 1653 Mr B autogr. Lost: cf. above bundle M

— Queries about Greatrix Mr B.	BL 3, fols. 33–4. Printed in R.E.W. Maddison, <i>Life of Boyle</i> (London, 1969), pp. 124–6, and Hunter, <i>Heads &amp; Inquiries</i> , pp. 31–2
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L.a

Recipes to which parcel add more that are worthy –	BP 26, fols. 100ff.
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— sal volat.	Ibid, fol. 100
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— apoplectic Balsam	Ibid., fol. 104
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— antimonii Lockii	Ibid., fol. 102
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— simple remedy for Chin Cough	Ibid., fol. 101
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— Mr Boyles bitter Tincture usd by hims.	Ibid., fol. 100b
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— Receipt for Ink Powder	Lost (unless BP 38, fol. 76)
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—     against the Stone	BP 26, fol. 103
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M.a

a Letter from Lewenhoecks to Mr B. Oldenb: <u>hand</u>	BL 3, fols. 125ff; <i>Correspondence</i> , vol. 4, pp. 416ff.
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a Letter relating to De bills Anatomy	BP 19, fols. 135–6
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## Appendix 2

## Miles' 'List of Titles' (BP 36, fols. 163–4 and 141–3)

[fol. 163/p. 1]

List of Titles as I sort em Feb. 10. 1742/3

NB by sheets here understand  
in writing not print – B for Bacon

1–The use of reason in N. Philos.  
1 sh[heet] B[acon] h[oc] e[st] but one  
side or page so for the rest

Perhaps an item from BP 9

2 mutual assistances that the practical  
& theorical parts of N. Philos. may  
afford each other proposd as a great  
inducement to hope for considerable  
things from Experimental Philos.  
3 sh[heets] B.

Probably BP 24, pp. 375–85; published  
in *Works*, vol. 13, pp. 350ff.

3. Of the use experiments to spec.  
phil. old hands  
of the use of spec. ph. to  
experiment. old hands  
1 page B [applies to both parts]

Perhaps a further fragment of the  
previous item; or, an item from BP 9

4. contents of 2<sup>d</sup> Essay about  
usefulness of Chym: to human life 1  
page B.

Lost: see BP 24, pp. 135–50, for a  
related Latin text (published in *Works*,  
vol. 13, pp. 321ff.)

5 2d Essay 1st pt. usefulness Chem:  
to Trades – pages 28 – folio

Lost

6 No VI of minerals about 4 pages  
Folio Mr Boyles Autog. or Mr Warrs  
NB. «these 7 No» calld the 6th Essay  
the General Title is of the Usefulness

This and the following six items, to no.  
12, evidently constitute lost section of  
*Usefulness*, as Miles' commentary shows

of the naturalist's Curiosity to his country or That the naturalist may much advantage men by exciting & assisting their Curiosity to discover take notice and make use of their home bred riches and advantages of particular countrys & increase their  
No.

Lost: this title appears in the synopsis of *usefulness* printed in *Works*, vol. 13, pp. lxxix–lxxx (cf. Joseph Glanvill, *Plus Ultra* (London, 1668), pp. 104–6), but it is not extant. The numbers given presumably relate to other titles in the same synopsis.

7 No V about 14 pages same hand

Lost, see no. 6

8 No IV de eodem &c 6 pages

Lost, see no. 6

9. No III de eodem 23 pages

10 No 11 de eodem 18

Lost, see no. 6

11 No 1 de eodem 8 or 9 pages  
in all about 64 pages

Lost, see no. 6 (in this and the next four entries, Miles keeps a running total of the overall pagination)

12 No VII about 8 more in all 72  
[6–12 bracketed together in list]

Lost, see no. 6

13 single papers belonging to an other Essay, but thrown together  
about 13 pages in all 85

Lost?

14. loose papers (sowd together)  
belonging to 3d Essay about 9 pages  
in all – 94.

Lost

NB here is in these the  
Conclusion of<sup>73</sup> 2<sup>d</sup> part of  
3 Essay which 3 Essay  
there call last but he  
alterd his mind I believe

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73 Followed by '6th Essay' deleted.



- |   |   |
|---|---|
| 15 More of the preceeding No. belong: to 3 <u>Essay</u> 17. in all, 111.  | Lost  |
| 16. Essay II. of concealment & disguises of Seeds pages 54 <u>last a little stained</u>   | Lost; concerning this lost work, see <i>Works</i> , vol. 4, p. 517; vol. 10, p. 366   |
| 17 Papers belong: to Notes about Sensation in General about 12 pages  | Lost; for the 'scheme' of this work, see BP 10, fol. 48v, and BP 41, fol. 51  |
| 18 6 Loose pages on the same (viz sensation) <u>here is</u> the beginn:   | Ditto   |
| 19. Notes & Experiments about Sensation in general 34 pages S[ai]d to be on XII <u>Essay</u> 35 <u>pages ask what to make</u> of. | The reference to 'XII Essay' suggests an overlap with <i>Usefulness</i>   |
| [fol. 163v/p. 2]  |   |
| 20 Anatomical Experiments <u>probably in to the</u> Theory Sensation p.3.B.   | Perhaps BP 18, fols. 129–30, but see above, p. 107  |
| 21. Of the Concealment and disguises <u>of Seeds in living</u> Creatures see No 16 above 9 pages                                  | Lost; see above, no. 16   |
| (22 History making Saltpetre & Gunpowder <u>must be</u> laid aside  | Perhaps by Worsley (see Charles Webster, <i>The Great Instauration</i> (London, 1975), pp. 378–9), or Thomas Henshaw's account in Thomas Sprat's <i>History of the Royal Society</i> (London, 1667), pp. 260–83 |
| 23 Titles for Nat. Hist. Common Salt 2 pages  | Lost  |
| (24 Stubbe's Remarks (in a Letter) on Mr B's philos. &c <u>to be laid aside</u>   | Lost  |
| (Letter of Dr Lister to Mr Oldenb. <u>to be laid aside</u>  | Published in <i>Oldenburg</i> ; manuscript now in Royal Society Early Letters   |

25 Of seminal principles pages 28 NB the 4. <1 <sup>st</sup> > wanting <u>on the outside</u> Wotton sais an Entire Discourse Q. for the rest.	Lost
26 Observations about uniting of the bark of trees cut asunder &c laid aside (worth <u>noting</u> ) and on Tobacco <sup>74</sup> also Sir R Weston of Clover	Lost. The last item is part of Hartlib's <i>Legacy</i> (1651).
27 Metamorphosis of the Planets by J <sup>no</sup> de Monte Snyders laid aside	Lost; presumably a manuscript copy of Monte-Snyders' <i>Metamorphosis</i> <i>planetarum</i> (1663) rather than the document now surviving as BP 30, pp. 415–17
28 Danger regulating experience upon probable reason. Tbd laid aside	Perhaps an item in BP 9
29 another Transcribd too about restoring Springyness to bodies. laid aside and another about Benjamin	Lost; see <i>Works</i> , vol. 1, p. 166
30 about 3 pages about Aurum fulminans	Lost
31. Hints for examination of drugs &c laid aside	Lost
32 Production Salts – 11 pages	Probably relating to <i>Producibleness</i> : see <i>Works</i> , vol. 9, p. xvii (a shorter section only)
33 Examination Sp[iritus] V[ini] 2 pages	?
34 Experiments proposd to Dr Lower about breaking Recept. Chyli in dogs laid aside	MS lost; cf. Lower, <i>Tractatus</i> (1669), and/or <i>Phil. Trans.</i> , 1: see <i>Works</i> , vol. 5, pp. 540ff.
35. Enquiries concerning Load stone 2 pages	Possibly BP 10, fol. 57

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74 Followed by '& Sant Foyne being Mr Hartlibs I believe' deleted.

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|---|---|
| 36 Experiment about Swelling Wood – a few lines   | MS lost; perhaps relating to the text published in ‘Appendix to the Statical Baroscope’, see <i>Works</i> , vol. 7, pp. 446–7 |
| 37 Experiment about Shining Wood<br>2 pages 2 more since  | Perhaps BP 25, pp. 391–4  |
| 38 List Experiments <u>received to be tryd by Mr B. to R.S. as I believe</u> , laid aside   | Perhaps BL 7, no. 54  |
| 39 Advertisement about Tract on Solitary Experiments <u>few lines</u>   | ?   |
| 40 about Tast – page <u>somewhat</u> mutilate   | Presumably BP 10, fol. 133v–4   |
| 41 Cold mixture <u>causing Effervescence</u>  | ?   |
| [fol. 141v/p. 3]  |   |
| 42. Notes I believe Stubbes on Mr B’s philos. laid aside with an paper of Experiments in vacuo Boyleana.  | For the former, cf. no. 24. The latter is perhaps BP 10, fol. 118.  |
| 43. List Experiments tryd or to be tryd in vacuo Boyl. laid aside   | See above, no. 38 or no. 42   |
| 44 <u>Several</u> papers belonging to additions to Experi: & observat. Physicæ see <u>for more, most sewd together in the midst to keep them from being mingled with others but must be sorted again into right order</u> | Perhaps part of <i>Paralipomena</i> : see esp. BP 25, pp. 217ff.  |
| 45 on Fire & Flame pages 87 <u>old hand</u>   | Mostly lost; only a few fragments survive: see <i>Works</i> , vol. 13, pp. xliv–xlvi and 259ff.                               |
| 46 Q. about Sensitive Plant 1 page.   | ?   |

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|---|--|
| 47 A Consolatory Letter supposed<br>to be <u>Written</u> to Theodoras Mother<br>to a <u>Gentleman</u> laid aside                              | Lost   |
| 48 another to a Kinswom. of hers<br>by a Lover with the former & other<br>pages of <u>same</u> subj.  | Lost   |
| 49 Apology for & antagonist of<br>Romances – laid aside   | Lost; see Principe, ‘Virtuous<br>Romance’, pp. 380–1   |
| 50 Notes, Mechan: «origin or»<br>product. of Inflam about 19 pages<br>with no 45 added 2 pages  | Lost; perhaps linked to BP 31,<br>pp. 277ff. ( <i>Works</i> , vol. 14, pp. 55ff.)  |
| 51 a great No loose papers & scraps<br>added on same Subj.  | Lost   |
| 52 a paradox shewing that Corpuscles<br>May <u>produce</u> parts <u>of flame</u> without<br><u>losing their own</u> [?] <u>nature</u> 7 pages | Lost   |
| 53. preamble to 2d pt of discourse<br><u>flame</u> &c 2 pages   | See above, no. 45  |
| 54 Mountebanks burning stone laid<br>aside  | ?  |
| 55. E. Winchelseas account Burning<br>Etna <u>which he saw</u> & Indian Fire<br>Works. laid aside   | Lost; probably related to the Earl of<br>Winchilsea’s <i>True and Exact Relation of<br/>the ... Eruption of Mount Ætna</i> (1669)  |
| 56 a Composition to burn under<br>water with Papers on Inflammability.  | Lost; perhaps related to <i>Works</i> , vol. 7,<br>pp. 102–4   |
| 57. Divers Experiments about Fire &<br>Flame Latin.   | See above, no. 50  |
| 58 Picture Fr[ench?] Burning glass  | Lost; possibly related to François<br>Villette’s burning mirror at Lyons,<br>about which Boyle and Oldenburg<br>corresponded in 1665 ( <i>Correspondence</i> ,<br>vol. 2, pp. 508ff.) and of which the<br>latter published a description in <i>Phil.<br/>Trans.</i> , 1 (1665), 95–8 |



59 Several loose papers on Fire	?
60 Essay containing two decades of promiscuous Experiments & Observations pages 43	Perhaps part of the workdiaries, but this item has not been identified
61 Pneumatic Experiments Q. whether printed 25 pages.	Perhaps the series of 'Experiment the ...', now scattered: see <i>Works</i> , vol. 6, pp. xvff.
*62 a fine Peroration to Pyrophylus begins page 169 and ends 184 <u>12 of first [?]</u> preceeding papers [15 <sup>75</sup> pages	Lost; for a discussion of this item in connection with BP 10, fols. 17–18 (comprising pp. 167–8 of the manuscript), see <i>Works</i> , vol. 13, pp. l–li
63. How to find how much pure silver is contained in a pound of oare large sheet finely written	Lost
64 preface to tract about Menstruums by Way of Letter to a friend p. 2.	Lost
65. Of mineralescent & Mettallescent Juices pages 30	Perhaps part of BP 20, pp. 305–404, printed in <i>Works</i> , vol. 13, pp. 377ff.
66 Of Kinds multiplication & use of Menstruums – pages 17	Lost
67. of menstruums pages 21	Lost
68 of kinds multiplication & Menstruums pages 30	Lost
[fol. 141/p. 4]	
69 heads disc. about Menstruums 2 pages	Lost
70 Experiments about Mus: Instruments moving when <i>unisons</i> are struck 4 p. [bracketed with 71 and endorsed: both laid aside]	Possibly BP 10, fols. 52–5

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75 Altered from '19'.

(71 Musical progression – not his	Possibly BP 41, fols. 1–21
(72 Hobbes propos: to R.S. <u>again</u> [st] Dr Wallis	Lost; one of the papers addressed by Hobbes to the Royal Society in 1671, see D.M. Jesseph, <i>Squaring the Circle</i> (Chicago, 1999), p. 281
(73 Thunder storm at Sea <u>nine</u> leagues off Cape Cod [bracketed with 72 and endorsed: laid aside]	MS lost; see <i>General History of Air, Works</i> , vol. 12, pp. 46–7
(74 Observat. about Vesuvius not his – laid aside	Lost; perhaps an account of the eruption of 1632
73 Brief Memorial of ‹artificial <sup>76</sup> › shining substance &c <u>in</u> Latin laid aside Q. <u>if not printed in</u> Engl.	BP 30, pp. 317–32. See <i>Works</i> , vol. 9, p. xl
75 of Bitumen 1 page	?
76 Vinum Hispanicum Ex ‹Succis <sup>77</sup> › fructuum <u>to</u> Hartlib laid aside	Lost
77 Regulae ‹studiorum› quædam Cartesio adscriptæ &c laid aside	?
78 de præcipuis actionibus automaticis in homine &c. I know not the author <u>the hand of</u> Oldenb: laid aside	Lost
79 use Weather glass to Mr Hartlib I <u>believe by</u> Dr Beale laid aside	Lost
80 Refining uncertain author laid aside	?
81 Two half sheets about Load stone	Probably BP 38, fols. 132–6
82 More loose papers on Load stone	Ditto

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76 Followed by ‘not’ deleted.

77 Replacing ‘Seccis’ [?] deleted.

- |   |  |
|---|--|
| 83 <u>Several</u> more on Magnetism & declination, many more on Variation   | Possibly BP 21, pp. 155ff., but see above, pp. 117, 121                          |
| 84 Letter of Dr Beale of Art of flying June 3 1665 3 sheets                 | Lost; presumably a treatise in epistolary form                                   |
| 85. Defect. of Thermom. from the same 1665                                  | Lost   |
| 86 descript. of a pump that emits Water continually 3 p two Cuts            | Lost   |
| (87 descript. <u>new</u> Telescope in French laid aside & of a Lamp         | Lost   |
| 88 Sounds in Vacuo Boyleano. 4 p.   | Lost   |
| (89 Observations Selected by Mr Oldenb. out of &c laid aside                | Probably BP 24, pp. 367ff.   |
| 90 Tincture of Coral & Crayons the latter in French laid aside              | ?  |
| 91 List experiments on bread.   | Lost   |
| (92 Husbandry <u>none</u> of his &c <u>other</u> Subj. laid aside           | Lost   |
| *93 Composition to burn under Water belongs to fire & flame a Scrap.        | See above, no. 50  |
| 94. Receipts how to silver metals, in French Laid aside                     | ?  |
| 95 Object: relating to Atomical Hypothesis &c 2 pages 1/2 another 1/2 sheet | Probably BL 6, fols. 35–6, printed in <i>Correspondence</i> , vol. 4, pp. 410–13 |
| 96 of things «erroneously» <sup>78</sup> taken for granted 1 page           | ?  |

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78 Replacing 'mistakenly' deleted.

97 use re[ason] in Nat. Philos. 1 page    Perhaps an item in BP 9  
see No 1

[fol. 142/p. 5]

98 Combination Menstrua (see                      See above, nos. 64–9  
before) half sheet

99. Incompetent Suppositions 1                      ?  
page 1/2

100 Miscellaneous thôts some belong                      ?  
to C Virtuoso 2 pages

101 Requisites in pract: problem – 1 p.                      ?

102 Discernment of Suppositions 1                      BP 9, fols. 13–15  
p. 1/2

103 Descript. of an oven laid aside a                      ?  
few lines

104 loose philosoph. notes – 1 p.                      ?

105 Case of Iron Wyre laid aside                      ?

106 Letter ‹to Mr B.› about lead Ore                      ?  
laid aside anonym.

107. Mr Colepress’s Letter with some                      See *Correspondence*, vol. 3, pp. 364–5,  
Minerals aside                      but the catalogue of minerals is not  
extant: see Birch, *Royal Society*, vol. 2,  
p. 241

(108 Several Experiments of Dr                      BP 20, but no document relating to  
Goddard Dr Merret & Dr Hooke\*                      Moray survives there  
to be laid aside to be Communicated  
to Mr Ward NB these are the same  
with those referd to in his Life p.14.  
See the date of Sir R. Morays  
proposal & Mr Hookes Experiment.  
‹\*see p.9. Derhams account of Hooks  
Experiments where those with glass



balls are inserted but not in the same order as to the latter part & some inserted not acc: to order of time, because Mr Derham did not know it [added at right-angles in margin]

\*109. How much Silver out of a pound of ore I believe a duplicate to No 63 Exam:

See above, p. 120

110 Dissolution of Gold – 1 page

See below, nos 118–19

111 another 1 page another Silver 1 p. Ditto

112 Mr Boyles observ. on Colepits near Mendip Anno 1658 1 p 1/2

Lost

(113 Of mines at Misnia laid aside

Lost

(114 Of growth of silver &c laid aside

Lost

115 Heads Nat. Hist. Gold 1 p.

Lost

(116 Alphabetum Minerale p. 32 laid aside not his

Lost; by J.J. Becher, published in *Tripus hermeticus fatidicus* (Frankfurt, 1689), dedicated to Boyle (possibly the dedication manuscript)

117 Heads N.H. of Copper – 1 p.

BP 36, fol. 80

118 Of dissolut: of Gold for medicine 1p.

?

119 of dissolution of Gold 1p.

?

120 de metallorum investigatione p.2 Lat. Q. whether his or no

Lost; possibly notes from Geber

(121 philos. discourse of Causes of Fluxes & refluxes of the Sea (in 4to) I think not his, aside

Probably the lost original MS of Wallis's paper published in *Phil. Trans.*: see *Correspondence*, vol. 3, pp. 141ff.

122 fragment of a Letter to make Sea Water Wholesome – 4 p. 4to	Perhaps the original of Boyle's letter to Fitzgerald: see <i>Works</i> , vol. 9, pp. 425ff.
*123. A short account of Mr Bs way of examining waters as to freshness &c as an Appendix to his Lately printed Letter about Sweetned Sea Water – p.8 B.	Boyle's letter as published by Sloane in <i>Phil. Trans.</i> , 17, 627ff.: see <i>Works</i> , vol. 12, p. xxvii (now only the Classified Papers copy survives)
124 duplicate	Lost
125. 1 p. of Saltness Sea	?
126 N.H. of Sea Heads only	BP 26, fols. 51–2
127. N.H. of Tides Heads	Lost
128 Articles inquiry <u>in to the</u> NH. of Seas.	See above, no. 126
129 <sup>79</sup> Titles for NH <u>same</u>	Ditto
(130 Sir R. Southwels Discourse of Water <u>before</u> the R.S. 1675 <i>aside</i> [fol. 142v/p. 6]	No BP copy: text printed in Birch, <i>Royal Society</i> , vol. 3, pp. 196ff.
131. Heads N. H. Water	BP 26, fols. 49–50
132 Another Histor. relat. of water falling &c according to Ebbing & flowing of Sea 1.p.B	?
133 <u>Several</u> fragments about water (one about drinking stinking water) pinnd <u>together</u>	?
134 Titles of N.H. Water <sup>80</sup> Duplicate	See above, no. 131. There is a further copy in BP 25, pp. 264–5.

79 Altered from '229'.

80 Followed by a deleted letter.

135. Experiments Observations & Notes about Water – 8 loose <u>half</u> Sheets.	?
136 Experiments & Observ. about Poysons 8 p.	See below, nos. 170–2
137 Tobacco poyson – 7.	Ditto
138. More of poison & Antidotes 8	Ditto
139. More — — 4	Ditto
140. More 4	Ditto
141. <u>Several</u> more in Latin – Q. whether his	Ditto
142 <u>Several</u> fragments on the same	Ditto
<hr/>	
143. Prefaces &c belonging to usefulness of Exper: Philos. <u>perhaps not printed</u> / p. 24	See above, nos. 2–14
144 Physiolog: Essays 40 p.	Lost; hardly any MS material relating to <i>Certain Physiological Essays</i> survives: see <i>Works</i> , vol. 2, p. xiii
145. 2 <u>half</u> sheets about american poison	Possibly linked to workdiaries
146 two more of reports extraord. & Experiments.	Ditto
147 Cogitationes physicae miscellaneous committed to Mr Oldenb. <u>hands</u> re [?] <u>again whether</u> his [?] about 23 pages	Mostly lost; two leaves with this title survive in BP 8, fols. 210–12
148 De otio Physici 2p. & Titles of good Hypoth: & other heads &c.	For the former, see BP 29, fols. 213–14, printed in <i>Works</i> , vol. 13, pp. 355ff. For the others, see above, pp. 97, 110, 113, 116–18, 124–5

149 Great many loose Scraps belong: to R. of good Hypoth. & Observat: Phys:	?
150 4 pages of requis: of good Hypoth:	Possibly BP 38, fols. 37–9; see <i>Works</i> , vol. 13, pp. 270–2
151.14 pages Hist: diseases	For manuscripts relating to nos. 151–3, see Hunter, <i>Scrupulosity and Science</i> , pp. 157ff., but less material now survives than is referred to here
152. 7 p. Methodus Medendi	Ditto
153. 18 doubts about practic. phys. Examen Materia Medica	Ditto
154. 6 obligat: to publish useful receipts & of practice phys.	Perhaps Boyle's 'Invitation to Free Communication', BL 1, fols. 146–7, but the rest lost
155. 15 p. Medicina Chromatica & 7 more	BP 28, pp. 100ff., published in <i>Works</i> , vol. 14, pp. 317ff.: but less apparently survives now than in Miles' time
156. 4 doubts vulg. pract. phys.	See above, no. 151
157. loose scraps Experiments Medicinal & Chem:	?
158 7 or 8 p. of Medicinal thôts 6 more	See above, no. 151
[fol. 143/p. 7]	
159.14 p. <u>in</u> 4to Medicinal receipts,	Lost
160 Examen Materia Medica 10 p.	See above, no. 155
161. 2 p. Mechan. Philos:	?
162 Scraps about Calculus humanus Observat. made	Lost: conceivably recopied from BP 22, pp. 26–7 (Workdiary 19)



- \*163. Informat. about Stone 2 p. & 7 or 8 more      Lost
164. mechan. observat. Product Light & Colors      Lost: presumably the English original of the Latin translation in BP 20, pp. 35ff., printed in *Works*, vol. 14, pp. 3ff.
165. about 30p. of fuel of suns fire & of heat of summer &c      Lost; Miles' memorandum at BP 36, fol. 166, lists this item as 'Mr Bs Autogr.'
- 166 5 or 6 History Air 13 more 4 more Springness of bodies 3. ferment      Lost
167. 3 or 4 p. a Letter of Dr Needhams against Dr Hooke about respiration [endorsed, with 168: put in S with same subj if not Mr Boyle's]      Boyle archive copy lost; presumably Needham's letter to Oldenburg of 10 March 1668, *Oldenburg*, vol. 4, pp. 237–44
168. 1 page Ld Brouncker about Compressd Air      Lost; related to the experiments reported in Birch, *Royal Society*, vol. 1, pp. 208–12
- 169 4 or 5 pages about alcali & acid –      Lost
- 170<sup>81</sup> some few loose papers about Vipers      Lost; probably part of the text listed below, no. 171
171. turning poisons into remedies 72 p.      Lost; presumably the late 1650s Boyle tract which Oldenburg excerpted in 1660s; the latter notes are printed in *Works*, vol. 13, pp. 237ff. See also above, nos. 136–42
- 172 another same 40.      Lost; see above, no. 171
- 173 Centuries severall of experiments & Observat. p. about 130 but several articles crossd      Workdiaries but not identified
174. 18 p. on Camæleon others in French from other authors      Lost

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81    Altered from '160'.

175 Spontaneous product. animals	For the extant fragments of this work, see <i>Works</i> , vol. 13, pp. 273ff.
176 Mouse under Water 1 p. scrap <i>legacies</i> [?]	The latter could be BP 36, fol. 87
177 various kinds natural Knowledge 4 p.	See BP 8, fols. 165ff.
178 Essay on Improb. truths p 59 & 5 or 6 more	Lost
179. Curious Letter of 2d sight. Anonymous. «& Mr Boyles preface» on same another another Indian conjuring	Lost: not BP 39, fols. 216–17
180 Letter to Dr JB. on Supernat. Phænomena – by Mr B. p. 2 & Duplicate	Lost
181 Two or 3 more sheets about appar. &c Vindic <u>to Mr B.</u>	Lost
182 History Tin 17 or 18 and many loose papers	BP 28, printed in <i>Works</i> , vol. 14, pp. 133ff.
183 about 20 pages about method to improve Ks Revenues from Tinn.	Lost
184 History Storm from Venice <sup>82</sup>	Probably BP 37, fols. 115–16, printed in <i>Works</i> , vol. 12, pp. 59–60n.
185 Phænom: in Air in Ireland	Lost
186 Voiding Bones & a man whose bones grow soft	?
187 Woman delivered of analipe [?] Latin	?
188 a maid <u>who</u> voided all her Viscera	?

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82 Bracketed with no. 185 and marked 'laid aside' deleted.

- 189 Woman prophesying in Dauphine Mostly lost, but see BP 40, fols. 100ff.,  
Indians Charm Serpents & Witchcraft for Scottish witchcraft cases  
from Scotland  
severall more of sorcery from divers  
parts
- [fol. 143v/p. 8]
- 190<sup>83</sup> Severall of apparations [sic] Mostly lost; but for the latter, see BP  
S. W. C<sup>s</sup> Story of Sir J<sup>no</sup> Trelawney 37, fol. 120
191. Petrefactions – 3. ?
- 192 Hydrostat fragments – 3 essays ?  
more loose of Examen Drugs  
Hydrostat. many more 8 or 10
- 193 19 p. of Hydrostat. weight Probably BP 23, pp. 557–90, printed in  
Cubic Inch Water a great Number of *Works*, vol. 14, pp. 109ff.  
loose papers or fragments about 48
194. passive deceptions 4 Probably notes from or a copy of van  
Helmont's 'Scholarum Humoristarum  
passiva deceptio' in his *Opuscula medica  
inaudita* (1648)
- 195 Statical Hygroscope 4. Manuscript lost; for text see *Works*, vol.  
7, pp. 427ff.
196. Floating Baroscope 13 Lost
- 197 Hist. of Dying 17. Boyle copy lost; this and the next item  
could be copies of Sir William Petty's  
work published in Sprat, *Royal Society*,  
pp. 284ff.
- 198 Apparatus to Common Hist. of See above, no. 197  
dying 34. Dup. 31
199. 6 about Diving 2 more Perhaps the work by John Beale in BP  
19, fols. 36ff.

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83 Altered in composition.

200 Distillation 2 & 28 p. more Dup.	Lost, but see BP 38, fol. 116
201. passive deceptions 14 p see above 194 No. Dupl.	See above, no. 194
202 Hist. Fire 19. 19 more	Lost
203. Flame 4. 4 more 3 heads	Lost
204 Heat. 2	Lost
205. Letter of Mr Newton to H.O. Esquire laid aside	Probably the copy of Newton's 1676 letter that is now Royal Society Early Letters OB 94
206 Bleaching wax & of Colors 13. 5 or 6 more added.	Lost
207 Experiments of sudden change Colors. 8 8 more	Lost: for the single MS fragment relating to <i>Colours</i> that survives, see <i>Works</i> , vol. 4, p. xiii. See also <i>ibid.</i> , vol. 11, pp. lviii and 391 ff.
208 Hist. Colors	Ditto
209. freezing & Cold Hudsons bay 19. 12 or 13 more & many loose papers. 2 or 3 more 5 more	Mostly lost; for the Hudson's Bay item see BP 39, fols. 49–51
210 Cloth sheeps wool. aside two	See above, no. 197
211 non absurdum admittere influxus cœlestes – uncertain author <sup>84</sup> in Engl. 4 or 3. 6 <u>more leaves before here</u> returned to <u>former</u> 2 or 3 more, more 8.	Probably BP 8, fol. 204, although this document is only two pages and the remainder must be lost
212 pores & Corpuscles of bodies 24. 5 more, 4 more, 37 more with some on Superficial pores, 34 more	BP 8, fols. 29–44, and BP 24, pp. 27–86, printed in <i>Works</i> , vol. 14, pp. 75ff., but further papers clearly lost

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84 Followed by 'aside' deleted.



213 de Collisione Corporum & [?] in Oldenb. <u>hand</u> & a paper against Hobbes <u>tis not</u> [?] authors, aside	Lost
214 Transmutation Elementary bodies loose papers <u>several</u> & <u>several</u> Chem: Experiments loose	Lost
215 volatility Motion in Vacuo 4 or 5	?
216 preservat. & putrefaction 15	Lost, unless part of workdiaries
217. Tryals about Humane blood proposd to Dr Lower 8 or 9. 2 or 3 appendix to humane blood	Lost: see above, no. 34; for MS material relating to <i>Human Blood</i> , see <i>Works</i> , vol. 10, pp. xiiff.
218 Hardness & softness 18	Lost
219 Local motion parts of bodies	?
220. 15. the uncertainty of analysis made by distillation 13 more	Lost; possibly related to <i>Sceptical Chymist</i>
221. 7. Q. whether there be Elements or other principles of bodies, a few <u>more Experiments in folio</u> , <u>a few more partly crossd</u>  [fol. 164v/p. 9]	Ditto
222. <u>observations on an artificial substance shining without any precedent</u> Illustration 7 p	See above, no. 73 (bis)
223 Inq: about lime 2. shin: wood. 3.	BP 26, fols. 75–6; BP 25, pp. 391–4
234 [sic] Icy Noctiluca	For extant MSS of this treatise, see <i>Works</i> , vol. 9, p. xxiv
235 Phosphorus 3 <u>sheets</u>	?
236 <u>shining fish</u> &c 3 <u>sheets</u>	Lost; perhaps the English original of BP 23, pp. 477ff.; printed in <i>Works</i> , vol. 14, pp. 38–40

237 mechanical production 3 &c 5 or 6 more	Ditto
238 <u>shining</u> Wood 20	Lost
239 Imperf. N. History 3 Dupl.	Perhaps the English original of the Latin text from BP 27, fols. 215–16; printed in <i>Works</i> , vol. 13, pp. 358ff.
240 useful: N History 3	?
241. diff. Naturalist 3 <u>or</u> 4 Geograph: Hist. Country	See BP 36, fol. 13, and (for example) BP 35, fols. 179–80
242 Of N.Hist 20	Lost
243 Cocoe tree 3	Lost
244 1 paper W India poys.	?
245. Letter Mr Kirkby's about Amber	Lost
246 <u>particular</u> Qualities. 3.	?
247 Free Inq: into Vulg: re <u>notion</u> . 11 pp.	On MSS of this work, see Hunter and Davis, 'Making of <i>Notion</i> ' (below, ch. 5)
248 petrifact: 1	?
249 Defence mechan. way of philosophiz:	Perhaps the 'Postscript' to <i>Notion</i> , BP 7, fols. 186ff., printed in <i>Works</i> , vol. 14, pp. 147ff.
250. Vulgar <u>Notion</u> &c 13, 6 more <u>uncertain what</u>	See no. 247
251 a book of draughts of Experiments another <u>not</u> material /verte  [fol.164/p. 10]	Probably lost
252. Torricell Experiment 5 or 6 after Hydrostat.	Perhaps BP 8, fols. 172ff.

253 preface to append: of Exper & Ob: physicæ & 1 Scrap 1 p.	Perhaps material relating to <i>Paralipomena</i>
254 3 or 4 of Ex. & Ob ph. with scraps	For relevant extant MSS, see <i>Works</i> , vol. 11, pp. lvff.
255 Strange Story Vitiat <u>sight</u>	?
256 Improvement Tin <u>for</u> K reven proposd <u>to</u> K. Charles 20	See above, no. 183
257 15 more. Q. if not taken in the list before	Ditto
<hr/>	
258 Letters Kirkby amber Beal (I believe) <u>about</u> veget	See above, no. 245
– <u>against</u> Hobs <u>in</u> Oldb. <u>hand</u>	See above, no. 72
2 or 3 Latin de velocitate	?
259 making Cloth 2, <u>several</u> pages <u>small hand</u> .	See above, no. 197
260 Sir I.N. to Mr Old. & Theory of <u>light</u> & Colors	MS lost: presumably Newton's 'New Theory', <i>Phil. Trans.</i> , 6 (1672), 3075–87
261 lowering bottles in sea	Probably the original MS of the text printed in <i>Works</i> , vol. 11, pp. lxix–lxx
262 Torricell. Exp. in French	BP 27, pp. 361–2
263. Dr Wallis solution of a prob.	MS lost; probably one of the items printed in <i>Correspondence</i> , vol. 6, pp. 115–16, 121–2
264 DAlbervilles practises with Ld Cootes servant	Lost; this item could relate to Richard Coote (1620–83), created Lord Coote, Baron of Coloony in 1660, but the further details have not been elucidated

265 <u>Strange</u> reports <u>few leaves in</u> Lat.	Perhaps BP 25, pp. 113ff.
266 Informat: Roman <u>an</u> Clergy in Ireland	Perhaps BP 40, fol. 140–2, or an ancillary item
267 Subterr: fire near NCastle	Possibly BL 7, no. 57, printed in <i>Correspondence</i> , vol. 4, pp. 379ff.
268 <u>several</u> pap: <u>about</u> Comets Dr Bainbridges & mock Suns	Lost; John Bainbridge (1582–1643) was the first Savilian professor of astronomy at Oxford
269 Sir R. Moray of Bernacles	Boyle archive copy lost, but printed in <i>Phil. Trans.</i> , 12 (1678), 925–7
270 Dr Beales on Snails	Lost
271. Colchester Oysters	RS MS 22
272 Fundamenta Mechanices	Possibly BP 21, pp. 383ff.
273. de febribus <u>from some</u> author	Probably a copy of or notes from van Helmont's 'De febribus' in his <i>Opuscula medica inaudita</i> (above, p. 130)
274 physical definitions	?
275. Sarotti Mathem. Schemes	Lost; presumably Paolo Sarotti, Venetian resident in London, 1675–81, or Giovanni Ambrosio Sarotti (d. 1733), FRS 1679
<hr/>	
276 Chem: pap: in Lat. & <u>other</u> loose useless I know not what <u>they belong to</u> . NB the above to the cross line [to 257] are to be laid aside with others R. to add <u>heads</u> of menstrua & unisons strings	Probably lost





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## Chapter 3

# The Workdiaries of Robert Boyle

## A Newly Discovered Source and its Internet Publication

Michael Hunter and Charles Littleton

### Introduction

It is unusual to be able to unveil a virtually untapped source for the study of a major scientist in the past, particularly when the figure in question was as innovative and influential an experimenter as Robert Boyle. Yet hidden among the chaotic mass of the Boyle Papers at the Royal Society is a coherent series of documents which we have christened Boyle's 'workdiaries'.<sup>1</sup> These comprise a series of notes on Boyle's own experiments, observations and measurements, data given him by travellers and others, and extracts from books. They date from throughout Boyle's intellectual career.

The importance of such material is obvious. For instance, in trying to reconstruct Boyle's experimental practices from his published accounts of them, Frederick Holmes has observed that 'no immediate records of his daily laboratory operations appear to have survived'.<sup>2</sup> Fortunately, that assessment was premature, and this chapter seeks to outline the nature of the new source; to consider the purposes that it served for Boyle himself; and to indicate the uses to which it should be possible to put it retrospectively – not least by deploying electronic technology to give it a shape and flexibility that transcend its current archival state. This has been achieved in the edition of the reassembled and transcribed material which is now available on the web at <<http://www.livesandletters.ac.uk/wd>>.

The reason why this material has hitherto been overlooked is that, when the Boyle Papers were bound in their current form in the 1850s, it was scattered as

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1 The term (which was not used by Boyle) has been coined by combining with the usage of his contemporary, Huygens, who bequeathed to posterity a series of 'work-books', Boyle's description of certain of them as 'diaries', thus doing justice to the sequential, diary-like information that these documents contain. See Joella G. Yoder, 'The Archives of Christiaan Huygens and his Editors', in Michael Hunter (ed.), *Archives of the Scientific Revolution* (Woodbridge, 1998), pp. 91–107.

2 F.L. Holmes, 'Do we Understand Historically how Experimental Knowledge is Acquired?', *History of Science*, 30 (1992), 119–36, on p. 127.

randomly through the length and breadth of the archive as was possible for a group of material of this kind.<sup>3</sup> As will be seen from the first of the two tables below, the workdiaries are spread through nearly twenty separate volumes of the Boyle Papers, in no significant order whatsoever. Hence, though all of the items in question were recorded in the catalogue of the archive first published in 1992, it took a further period of scrutiny and analysis to bring them together and to put them in a meaningful – and usable – order, which is completely different from that in which they happen to survive.

Yet, once this is done, they form a surprisingly homogeneous group, almost more so in their format and presentation than in their content, as we shall see. Mostly, they comprise sets of folded foolscap sheets, opening with such headings as ‘Promiscuous Observations’ or ‘Philosophicall Entrys & Memorials’, and comprising a series of self-contained entries varying in length from a line to over a page (see Plate 3).<sup>4</sup> The earliest are written in Boyle’s own handwriting, but from the mid 1650s onwards they are written in the hands of the various amanuenses whom Boyle employed, as itemised in chapter 1. The beginning of each series is often dated, sometimes with a significant date such as the beginning of the year or Boyle’s own birthday (25 January), while individual entries within them also sometimes bear a date. In addition, they are often numbered, sometimes at the time when they were compiled, sometimes retrospectively, usually in groups of a hundred, or ‘centuries’ – a concept that Boyle evidently derived from the author who inspired his collecting of natural historical data, Francis Bacon, Lord Verulam, whose *Sylva sylvarum* (1627) was so arranged.

These notes span Boyle’s career as a writer. The earliest survive from April 1647, when he was twenty years old, and a further dated series was begun just under a year later. There are then dated groups from various years in the early 1650s, while series dating from the later 1650s and from each subsequent decade in Boyle’s life can be identified from internal dates and clues from handwriting and the like. The last sequence, entitled ‘The XVIII Century’, has entries going up to August 1691, in other words only a few months before Boyle’s death on 31 December that year. In total, there are forty more or less extensive workdiaries, containing a total of just over 3,000 entries. Of these, five (with 674 entries) date from the 1640s; six (with 185 entries) from the early 1650s; seven (with 290 entries) from the late 1650s; two (with 136 entries) from the early 1660s; seven (with 879 entries) from the late 1660s; three (with 307 entries) from the early 1670s; two (with 16 entries) from the late 1670s; three (with 194 entries) from the early 1680s; and five (with 387 entries) from 1685 to Boyle’s death.

Yet, once the different series are placed in juxtaposition with one another, it becomes apparent that the sequence is far from continuous. Thus there is a marked gap in these documents between 1657 and 1662, although there is reason to believe that Boyle continued to compile such records during those

3 On the history of the archive, see above, esp. pp. 22–31.

4 A few are of octavo or duodecimo format: Workdiaries 18, 27 and 33.

years, not least since dated entries from them were recopied into later workdiaries that survive.<sup>5</sup> The coverage is also patchy from the mid 1670s to the mid 1680s. Some of these gaps may reflect discontinuities in Boyle's practice in keeping such records, but others are undoubtedly due to losses. Of these, some are probably due to the general attrition of Boyle's corpus dealt with in the previous chapter: it is thus symptomatic that one item, Workdiary 26, is now with the papers of Thomas Birch in the British Library.<sup>6</sup> But the corpus may already have suffered during Boyle's own lifetime, as is suggested particularly by his complaint in the broadsheet *Advertisement ... about the Loss of many of his Writings* that he issued in 1688 how, when he came to 'review and range' his papers, he found that

I wanted four or five Centuries of Experiments of my Own, and other Matters of Fact, which from time to time I had committed to Paper, as they were made and observ'd, and had been by way partly of a *Diary*, and partly of *Adversaria*, register'd and set down one Century after another, that I might have them in readiness to be made use of in my design'd Treatises.

Noting that 'seven or eight Centuries of Notions, Remarks, Explications and Illustrations of divers things in Philosophy' which he had recorded were also untraceable, he went on express his puzzlement that these should be missing while other comparable documents survived, darkly implying that the losses were due to theft.<sup>7</sup>

On the other hand, one reason for the failure of certain workdiaries to survive is suggested by the same *Advertisement*, in which Boyle recounted how

One whom I had order'd to do something with a Bottle of Oyl of Vitriol, unluckily broke the Glass just over a flat Chest of Drawers, which I had purposely caus'd to be made for no other use, than to keep in it my own Manuscript Papers, whereof it had then good store. And though I happen'd to be at that time in the Room, and made hast to unlock the distinct Drawers, and take them out; yet the highly corrosive Liquor had made such haste, and such havock, that several Manuscripts, and among them some that I most valu'd, were quite spoil'd.

At least two workdiaries that survive show signs of damage from chemical spillage (see Plate 7), and others may have been irrevocably damaged in such ways.<sup>8</sup>

5 See esp. 21–237, 239, 242, 246 and 265. Here and hereinafter, references to workdiaries are given in this form, i.e. the number that we have given to the workdiary (see Table) followed by the number(s) of the entries within it.

6 See above, pp. 43–4, 73, 86–7; Michael Hunter, *Robert Boyle (1627–91): Scrupulosity and Science* (Woodbridge, 2000), pp. 263ff.; Michael Hunter and Lawrence M. Principe, 'The Lost Papers of Robert Boyle', *Annals of Science*, 60 (2003), 269–311, reprinted as ch. 2, above.

7 *Works*, vol. 11, p. 169.

8 *Ibid.*, p. 170. In addition to Workdiary 34 (Plate 7; BP 25, pp. 51–4) see also Workdiary 22 (BP 8, fols. 87v–8).



## The Content of the Workdiaries

Not only are there lacunae in the series; there are also highly significant changes in content, notwithstanding the striking continuity in terms of presentation already noted. Initially, in the late 1640s, the workdiaries are literary. The principal component comprises extracts from the French chivalric romances which formed Boyle's staple reading during his adolescence, and which inspired various of his earliest writings.<sup>9</sup> In addition, there are extracts from the English equivalent of this, in the form of extracts from the (then unpublished) *Parthenissa* by Boyle's elder brother, Roger Boyle, Lord Broghill. There are also *obiter dicta*, evidently intended for later reuse in compositions of Boyle's own. For instance, one aphorism, 'He whose Faith never Doubted, may justly doubt of his Faith', was used in virtually identical form in Boyle's 'Essay of the Holy Scriptures' of c. 1654, recently published for the first time in the new edition of his *Works*.<sup>10</sup> At this point, the workdiaries are virtually indistinguishable from the commonplace books familiar to students of Renaissance literature.<sup>11</sup>

In 1650, the content of the workdiaries changes decisively. The literary *obiter dicta* disappear, never to reappear, and instead the content of the workdiaries comprises recipes, mostly for herbal remedies for ailments from which Boyle and his friends suffered, supplied by such associates of Boyle's as Benjamin Worsley and Gerard Boate. For instance, the first diary of the new type includes the entry:

In Malignant Feavors (& in them only,) Mr Worsly uses to apply «as a Poltesse» to the Soles of both Feet once in 12 howres, Three parts of Leaven, one part of Piggeon's Dung; & one part of Onyons & Garlicke made up into a kind of Past with a little Turpentine.

It also gives hints on the 'Lute' to be used in lining furnaces employed for chemical processes. Indeed, this complete shift in subject matter within a group of documents of similar format has been cited elsewhere as one of the most dramatic pieces of evidence of the change in Boyle's intellectual goals from literary to scientific that occurred c. 1650.<sup>12</sup>

9 See Lawrence M. Principe, 'Virtuous Romance and Romantic Virtuoso: The Shaping of Robert Boyle's Literary Style', *Journal of the History of Ideas*, 56 (1995), 377–97.

10 *Works*, vol. 13, p. 181. For the workdiary entry, see 1–24.

11 In this connection, it is worth mentioning an even earlier survival, Boyle's student notebook compiled in Geneva in 1643, Royal Society MS 44, which includes 'Diverses Pieces, Sundry Peeces, Commencées Le Premier jour l'An 1643': see Lawrence M. Principe, 'Newly Discovered Boyle Documents in the Royal Society Archive: Alchemical Tracts and his Student Notebook', *NRRS*, 49 (1995), 57–70, on pp. 62–3. For a recent account of commonplace books, see Ann Moss, *Printed Commonplace-Books and the Structuring of Renaissance Thought* (Oxford, 1996).

12 Michael Hunter, 'How Boyle became a Scientist', *History of Science*, 33 (1995), 59–103; reprinted in Hunter, *Scrupulosity and Science*, pp. 15–57, on pp. 25–6. For the entries quoted, see 6–10 and 6–4.

Similar workdiaries continue for much of the 1650s, comprising recipes and processes, sometimes in Latin and often identified as being derived from others, including the Catholic virtuoso Sir Kenelm Digby and such members of the circle of the intelligencer Samuel Hartlib as Frederick Clodius and J.S. Küffeler. A typical entry concerns Digby's method of preparing sherbet:

he takes Lemons & he very carefully [pa]res of all the yellow rind which otherwise would imbitter the drinke, then he express the juice either betwixt his hands (or otherwise) this Juice carefully freed from the seeds, in a glasse or Silver vessell (non pewter platter) he makes to simmer away with a very gentle heat, till it come to the consistence of a Syrup, which be extreamely acid[;] at the same time he provids fine Suger dissolved in a litle rose water & boyled to a Candy height, & <into> this Suger he poures of the warme Syrup (incorporateing them well together) as much as will make the mixture of the sharpnesse he desires & the Syrup will be somewhat blacke but the whole Composition wilbe white enough & haveing kept it carefully addinge at pleasure when it first begins to coole, what quantity of Ambergrease ground with a litle fine Suger,

In thus ending rather breathlessly in mid-sentence, this account gives a sense of Boyle's busy pursuit of the processes, both chemical and medical, to which these compilations are mainly devoted – very much the stock in trade of a virtuoso of the period. Indeed, some of the workdiaries from this period are folded up and worn, as if Boyle carried them round with him in his pocket.<sup>13</sup>

It is in fact the workdiaries of this period that virtually alone have attracted scholarly attention, in this case from William Newman and Lawrence Principe in their study of Boyle's relations with the American alchemist George Starkey, whose influence bulks large in this particular group of documents. As Newman and Principe show, many passages in them comprise Latin chemical processes, evidently copied by Boyle from Starkey's notes; but they are intriguingly interspersed with ancillary hints in English, as if Boyle was able to ask Starkey questions about the process in question and to write down his answers.<sup>14</sup>

If medical and chemical recipes characterise the texts up to the most significant gap in the series already noted, from the late 1650s to the early 1660s, the lacuna that follows is all the more noticeable because, when the series recommences in 1662, it is very different in nature. In particular, the records of experiments and processes that now appear have a quite different character from those of the workdiaries of the 1650s, being much more indulgently narrative in tone, much more explicit about the rationale of the experiment and the extent to which Boyle was or was not surprised by his

13 13-15. For examples of documents folded and worn in this way, see Workdiaries 8 and 9 (BP 25, pp. 344, 358).

14 W.R. Newman and L.M. Principe, *Alchemy Tried in the Fire: Starkey, Boyle and the Fate of Helmontian Chymistry* (Chicago, 2002), pp. 215–21.

findings.<sup>15</sup> They are also more general in subject matter – evidently reflecting the influence on Boyle of his contact with the Oxford Experimental Philosophy Club from 1656 onwards – as with this experiment in Galilean mechanics from the first series of the resumed records:

We went to the Schooles «at Oxford» & with an exact Instrument where single Vibrations were half seconds, we measur'd the encrease of velocity of a descending Ball of Iron fastend by a string to the Instrument, & for the most part our Observations agreed in this That in 4 single Vibrations & very little more, the Iron fell the height between the Battlements of the Schoole & the Pavement amounting to 56[;] then we shortend the String & made it sometimes 36, sometimes 35 feet, & leting fall the Iron we found as we expected, that it fell downe that length in 3 single vibrations, & when the length was 36 the Pendulum seem'd to begin to be upon the returne. The same Ball let fall from the Tower [of] the Schooles where it is 80 foot high appeard to fal[l] somewhat less then 5 semiseconds «or perhaps in 4» & a half. And by [the] Pendulum that vibrated half seconds, but is thought to have its string strechd too long, I at the bottome reckond 4 semivibrations before the Bullet was come as I could guesse, within some yards of me.<sup>16</sup>

Other accounts record chemical and pneumatic experiments, reading very like those which Boyle had by this time begun to publish, most notably in his *New Experiments Physico-Mechanical, Touching the Spring of the Air and its Effects* (1660). It seems likely that this reflects a significant change in Boyle's intellectual personality brought about by the experience in writing and publishing that he acquired in the late 1650s and early 1660s.<sup>17</sup> In addition, an appetite for exact mensuration now sets in which had not been in evidence earlier. It is also, incidentally, at this point that the word 'experiment' is first used in the workdiaries.<sup>18</sup>

These notes provide crucial information about the progress of Boyle's career as an experimenter which demands proper analysis. One issue is of the periodisation of Boyle's experiments – not only such obvious points as his tendency to experiment on cold in the winter and on fermentation in the summer, but also the appearance of experiments in clumps, reflecting Boyle's particular interests at any one time, whether it be in respiration or in the chemical analysis of salts. Detailed analysis of this material will reveal the development of Boyle's thinking concerning the processes involved, and of his agenda for experimentation, even when he does not specify it himself. There

15 Newman and Principe note a limited analogue to this in certain of the processes derived from Starkey (though in none of the other entries of the 1650s), which sometimes include hints of their rationale: loc. cit.

16 19-2 (part of this entry appears in Plate 3). For an account of this phase in Boyle's career see R.G. Frank, *Harvey and the Oxford Physiologists: A Study of Scientific Ideas and Social Interaction* (Berkeley and Los Angeles, 1980).

17 Cf. *Works*, vol. 1, pp. xxxiii–xxxiv.

18 19-1 (see Plate 3).



are also tantalising hints concerning his experimental equipment – the furnaces, ‘receivers’, thermometers and hygrosopes that he deployed – and about the milieu in which he worked. For instance:

About the latter End of September a *fine* sponge, that had been kept some time in the Roome I lay in was put to the exact weight of halfe a Drachm in an ordinary paire of Gold scales, & being removd presently after (which was a little before bedtime) into a Roome without a Chemny (but divided from [the] former only by a narrow Entry) the Ballance began manifestly to loose its Equilibrium before I went to bed, & the next day about noone the sponge appeared to have gaind between 2 or 3 graines of Additionall weight. when the scales were removd out of this cold Roome into the other, the sponge would soone begin to grow sensibly lighter, & being reducd to an æquilibrium when I went to Bed would in the next day in the forenoone appear to have lost a graine or a graine & a halfe of the weight it had over night.<sup>19</sup>

In other instances, we hear of observers who were called in to witness a specific phenomenon, as with the scent given off by a rose preserved in a vacuum for a year, when ‘a young Lady, that being in an other roome and knowing nothing of what had passd before, was invited to say what she could conjecture that smell to proceed from’.<sup>20</sup>

The workdiaries of this period also differ from their predecessors in that three different types of diary appear to have been in progress in parallel, with largely but not wholly discrete subject matter. In addition to the texts already noted, which mainly comprise Boyle’s own experimental findings, we also have a series dedicated to extracts from his reading in travel books, earlier works of natural philosophy, and the like (a rather different type of reading from that of his adolescence). In particular, a long series in volume 8 of the Boyle Papers comprises material drawn from a variety of sixteenth- and seventeenth-century authors, for instance quoting the Italian naturalist Ulisse Aldrovandi, on the properties of iron; the English divine and navigational author William Barlow, on magnetism; or the Flemish ethnographer Johann de Laet’s *Novus orbis, seu descriptionis Indiae occidentalis* (1633), on predatory fish.<sup>21</sup>

In addition, and again rather separate from Boyle’s experimental notes (though such materials are occasionally juxtaposed), there are notes on interviews that Boyle had with visitors, ranging from fellow aristocrats to sailors and others who had travelled to exotic locations, and even artisans whom he quizzed for information about their trades. This comprises some of the most approachable material in the series, and it reveals key aspects of Boyle’s intellectual method, not least the way in which his interrogation of his informants reflected a pre-prepared agenda on his part, often based on reading

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19 21-221.

20 29-237.

21 22-48, 63 to 68, 76.



that he had done. Here, for instance, is part of a conversation that he recounts with a traveller who had visited mines in central Europe – possibly Edward Browne, son of Sir Thomas Browne, who travelled widely and published *A Brief Account of some Travels in Hungaria, Styria, Bulgaria, Thessaly, Austria, Servia, Carynthia, Carniola, and Friuli* in 1673:

I also discoursd with him about the Tradition taken notice of by our Verulam that mineralls are very much lighter in the Bowells of the Earth or in their proper veines then they are above ground & hereupon he told me that haveing gone to visit a great mine of Sal Gem, in Transylvania, he found it the generall Beleife of the workemen & observd himselfe that great Lumps of this fossile salt, might with ease be managd & lifted up in the mine which when it came to the aire, seemd to be 3 or 4 times as ponderous, which supposing the truth of the matter of fact, may perhaps be in part causd by the moist vapours of the aire, which the salt long kept from it plentifully imbibes, & by retaining them much increases the weight of the masse, & perhaps this change observd in <fossile> salt, may have been too farr <extended> by others & have <con>tributed to the Birth or growth of the Tradition, which extends this property to all kinds of mineralls in generall.<sup>22</sup>

To some extent the interviews may have taken place on an almost random basis (and it seems likely that a fairly miscellaneous range of information might come to light in any specific conversation). But often, Boyle seems specifically to have sought out a particular informant because he wanted to learn more about a topic on which he understood the man in question to be an expert. The way in which such contacts occurred is perhaps illustrated by a slightly later episode that has been investigated in detail, Boyle's interview with Lord Tarbat about second sight in Scotland on 3 October 1678; this led to an explosion of interest in the topic over the next two decades for which Boyle is largely responsible.<sup>23</sup> For it appears that Tarbat had divulged similar information to the Earl of Lauderdale, Secretary of State for Scotland, and his entourage earlier that year, and it must have been through his contact with the royal court that Boyle learned of this and summoned Lord Tarbat to visit him when he was in London some months later.

As far as the workdiaries are concerned, such encounters sometimes resulted in lengthy passages like the following one from the late 1660s:

Makeing severall Inquirys of an observing Sea Captain (<N> Parricke) Captain of an East India Ship newly returnd from the South Sea I had in Substance these Answers.

That he had divers times seen toward the South Pole the Clouds that some few Navigators mention to be there & to move about the Pole in 24 hours. <That> He began to discover that plainly <when he was in> about 18 degrees, (as I remember,) of

22 21-308. Before 'Tradition', 'vulgar' is deleted.

23 See Michael Hunter, *The Occult Laboratory: Magic, Science and Second Sight in late Seventeenth-century Scotland* (Woodbridge, 2001), pp. 51-3 and *passim*.

South Latitude. <That> they were white, in number three (tho two of them be not very distinct from each other) the greatest being far from the South Pole, the other not many degrees remoter than that Starr which of the conspicuoust ones they reckon to be nearest to the Pole tho it be about 11 degrees distant from it / He sayes some call them the Magellanik Clouds, for my part I should guess that if they were lookt on through a good Telescope they would be found Constellations of small & singly inconspicuous Starrs, like those of the Galaxy the Belt of Orion &c.

He answerd me that that part of the Milky way which <is> not upon our Horizon (for he says, the Galaxy is a Circle) he hath severall times observd in the Southern Hemisphe[re] two or three places that lookt like Clouds, & mov about regularly with the white part of the Circle 24 hours. But these are not black but blew & seem to be but perforations thorow the milky way (ie) parts of the Azure Sky, that are sufferd to be seen by the discontinuations of the parts of the Galaxy.

He observd noe dipping of the magnetick Needle towards the Southern Pole, nor any vareing about to the Points.

He answerd me that in the vast Ocean betwixt the Cape of Good Hope & India (especially Bantam) he found the needle to vary often & sometimes many degrees (& this far from any Shore) insomuch that they differd 16 or 17 degrees of what it was in someone other.

He told me that in the Venetian Gulph which he much practisd, he often found the Needle to vary 1, 2, or 3 degrees in sayling but a few hours, & then perhaps it would return to its former Declination, & this Extravagancy he observd to happen more than once in a days time.

He answer'd me that in the South Sea he likewise observd the Sea to shine very much, & especially with Westerly Winds as in our Hemisphere he observd it to doe most with Southerly Winds. Some times it would shine, not only in the way of the Ship, or where the Water was broken, but at a great distance off in calm Weather upon the least breath of Wind that would but curl the water.

He further answerd me that takeing it up oftentimes in the hollow'd Palm of his Hand it would there continue to shine, & tho at other times the Water would not shine ev'n in the Ships way where it was broken by the Prow.

He told me that the greatest Thunders he had ever met with in the South Sea, or elsewhere he heard upon the Coast of Sumatra, where the Lightnings would be soe numerous that the whole Sky seem'd to be fire, & where he saw many great fiery Balls, (as it were) passing to & fro through the Air, but could never perceive that any Thunder Stones fell.

He told me that the changes of the Air were very great & very frequent passing the Line, & that the greatest depth of the Sea he found by sounding was a good way off the Cape of Good Hope he had sometimes <an> 100 & sometimes 120 fathom, beyond which depth <of the sea> he made noe Tryalls.<sup>24</sup>

That this particular type of workdiary first burgeons at the time it does, in the 1660s, may not be wholly fortuitous, since it coincides with Boyle's increasingly prolonged residence in London, culminating in his actual move to

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24 21-635 et seq. Each paragraph is given a separate entry number.

the metropolis in 1668 to live with his sister, Lady Ranelagh, at her house in Pall Mall. Clearly the move gave Boyle direct access to types of informant whom he had been less likely to run across in Oxford, his main place of residence since 1656. This bears out Thomas Sprat's view in his famous *History of the Royal Society* (1667) of the benefits to natural philosophy of being based in such an entrepôt as London, with its combination of trading contacts and gentility: 'if we should search through all the World, for a perpetual habitation, wherein the Universal Philosophy might settle it self; there can be none found, which is comparable to *London*, of all the former, or present Seats of Empire'.<sup>25</sup> Indeed, this may have been one of Boyle's motives for leaving Oxford when he did.

Moreover, the move may be linked to a change in the kind of book that Boyle began to publish around 1670. In contrast to his writings in the 1660s, which comprised either experimental narratives such as his *Hydrostatical Paradoxes* (1666) or more programmatic works such as his *Origin of Forms and Qualities* (1666), many of the works that now came out were briefer and more speculative in nature, often dealing with phenomena illustrated by the reports on exotic places that he received in these interviews. Such works as *Cosmical Qualities* (1670) and various components of the volumes of 'tracts' that Boyle put out in the early 1670s are full of such data, and this continued to be the case later, not least with the section on 'Strange Reports' appended to his *Experimenta et Observationes Physicae* of 1691, which was at least partly of earlier date.<sup>26</sup>

However, after a spate of surviving workdiaries of these various types from the 1660s into the early 1670s, the pattern then changes again. From 1674 we have a unique example of a compilation which is in the form of a workdiary, with dated, numbered entries, but which comprises, not experimental or observational notes, but examples evidently for use in Boyle's methodological writings on natural philosophy, marked with abbreviated titles which were then revised (Workdiary 28). Over the subsequent few years, the number of extant workdiaries dwindles, and, though some that survive resemble the manner of reportage of the 1660s, others revert to a style more reminiscent of the 1650s, taking the form of starker records of recipes and processes, at this point frequently disguised by the use of code (Plate 7). This is clearly to be seen in the context of the peak in Boyle's interest in alchemy in the late 1670s, as documented by Lawrence Principe in his classic study, *The Aspiring Adept: Robert Boyle and his Alchemical Quest* (Princeton, 1998); the same author has lucidly documented the word-substitutions and ciphers which Boyle used in such notes to disguise the information included in them.<sup>27</sup> For instance, take a passage that reads in the original as follows:

25 Sprat, *History of the Royal Society* (London, 1667), pp. 86–7.

26 See, for instance, *Works*, vol. 6, pp. xl–xli; vol. 7, pp. xxix, xxxv; vol. 11, pp. lvi–lvii (for the date of 'Strange Reports', see *ibid.*, p. liv).

27 L.M. Principe, 'Robert Boyle's Alchemical Secrecy: Codes, Ciphers and Concealments', *Ambix*, 39 (1992), 63–74.



With Dicla and mardium prepare Nigerus by 7 operations, then mix with it Barakid a 12th part, keep it about 3 dayes in digestion till opening the Vessell from time to time toward the latter end, you perceive almost all the Barakid to have gained the lower part of the Mixture.

(The fifth word from the end is annotated by Boyle: 'quaere, if not the Upper'.)  
What this actually means is:

With cinnabar and iron filings prepare Mercury by 7 operations, then mix with it Silver a 12th part, keep it about 3 dayes in digestion till opening the Vessell from time to time toward the latter end, you perceive almost all the Silver to have gained the lower [upper] part of the Mixture.<sup>28</sup>

After a period of a decade or more dominated by material of this kind, however, from the mid 1680s until the end of Boyle's life a pattern recurs which is very similar to that of the 1660s. Thus there is an extensive series of reports from travellers and others, as with 'the Chinois I was visited by yesterday', who

told me in answer to some Questions I made him, 1. That the number of their Characters was really incredibly great, & that He himself was master of between 10 & 12 thousand of them. 2. That the language of the Mandarins (or Magistrates) was very different from that of the Common people, & also from that of the Clergy, & some of the *Literati*: insomuch that few understood the Mandarins Language, or could make any use of it; thô, for his part, He had made some progress in it.<sup>29</sup>

Boyle was also fascinated by reports of poisons and the like from visitors to exotic locations such as Sir Matthias Vincent, 'a very intelligent person, that presided in the English Factory on the Coast of Coromandel in East India', who

answer'd me (yesterday) that, thô He be not forward to admit Witchcrafts or Inchantments, yet He allow'd that the Story I had been told about the Serpents in those Parts, might be very true. For He related to me, that He had several times seen ignorant & pitifull Peasants bring long serpents, (sometimes 3 or 4 foot long or upwards, & proportionably thick) coil'd up like Roaps in Baskets; & that, upon muttering of certain Words in a dolefull kind of Tone, these Serpents would erect themselves, &, leaning upon their Tails & a little more of the lower part of their Bodies, would move to & fro in an odd manner but in an erected posture, & continue a kind of rude Dance, as long as the Indians «ridiculous» Musick lasted; & afterwards suffer'd themselves quietly to be coyl'd up, & put into the Baskets again.

28 34-55.

29 36-69. The identity of Boyle's informant is suggested by a letter of introduction for Michael Shin fo-çung from Thomas Hyde, Bodley's librarian, of 26 July 1687: *Correspondence*, vol. 6, p. 226.



When I ask'd Him, whether He had observ'd these Serpents to be poysonous, He answer'd that He never saw any Tryal made of their venom, but that 'twas generally believ'd it was very dangerous,  $\langle$ when not mortal.

He continued by noting an analogous observation by another 'ingenious man' before giving a further commentary on Sir Matthias' account, and particularly the fact that the snake charmers were able to work their effects not only on tame snakes but also wild ones.<sup>30</sup>

In addition, there are various workdiaries – now consciously headed 'the XVI Century', and so on – which give reports of experiments that Boyle carried out in very similar terms to those of the 1660s. For instance:

In a small Receiver capable of holding about [space left blank] ounces of Water, we put a couple of House Snails, & having diligently pump'd out the Air, we observ'd that they both of them continu'd to move as before, insomuch that they climb'd up to the top of the Receiver, & seem'd unconcern'd enough at the absence of the Air, save that they appear'd swell'd, probably by the expansion of the Aereal Particles contain'd in their Juices. We kept and observ'd them in our *Vacuum* for a full half quarter of an hour (reckon'd by a Minute Watch) & then let in the Air, which in a trice made them manifestly shrink into lesser Dimensions.<sup>31</sup>

Others relate to more recent experimental concerns on Boyle's part, including the interest in phosphorus reflected in his *Aerial* and *Icy Noctiluca* of 1680–2, as in the following trial from 'the XVIII Century', dated 17 September 1690:

We took a fragment of Solid Noctiluca of about the bignesse of a pea, & placing it between two flat pieces of clean glasse, endeavor'd for tryalls sake to extinguish it, as men are wont to do bits of kindled charcoale, snuffs of candles & other such common fires by compression. But thô we thrust the two pieces of glasse strong against one another yet we were not able by this means to extinguish the fire, or  $\langle$ totally destroy the luminousnesse of the matter. for all about the edges, the matter shone very near if not full as vividly as before, & so it did over all the lower surface too, when the glasse has been separated that surface enjoy'd the contact of the air. But the upper part of this noctilucall matter, which because of the pressure it had been expos'd to, stuck very close to the lower surface of this upper glasse, & was thereby fenc'd from the contact of the Air Appear'd black or considerably except as was lately noted at the edges which were touch'd by the Air whether the two glasses were kept compresst, or the darken'd part was lookt on through the upper glasse only.<sup>32</sup>

In addition, there are extensive records of weights and measurements, often of mineral and other substances that interested Boyle.

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30 36–36.

31 37–97.

32 38–105.

## Boyle's Use of the Workdiaries

This, then, is a brief conspectus of the evolution of the workdiaries over Boyle's career. The question remains, what were they for? Why did Boyle record all this data and how did he intend to use it? To some extent, it seems as if, for Boyle, their compilation was almost an end in itself, such recording evidently being impulsive, almost obsessive. This is seen particularly in his intensive records of specific gravities: it is almost as if, whenever an object or substance came into his hands, he felt bound to record its density relative to a fluid, in some cases his own urine.

Yet the value that Boyle placed on such records is clear from the care he took in preserving them. He clearly kept the workdiaries as discrete items which are identifiable in the inventories of his papers that were made in the later years of his life, wherein interesting hints are provided of the manner in which they were stored during Boyle's lifetime. Thus Henry Oldenburg's listing of Boyle's papers on 26 March 1677 includes 'A Chaos of Experiments of my owne, consisting of nine Centuries. In three or four several paper books', while the inventory of boxes 'A' and 'B' of c. 1680 again refers to a variety of 'Bundles' and 'centuris' of material, including 'A chaos of 3 centuris to which are added the 6<sup>th</sup> & 8<sup>th</sup> centuris all in a Black & Blu string Booke', presumably meaning that they comprised sheaves of notes pierced near the spine and sewn together with string of these colours.<sup>33</sup> The inventories from Boyle's last years again give clues as to how material of this kind was stored, as in 'Some Centurys of notes thoughts &c fol: red strings' (these were again presumably sheaths of notes stitched with string), or 'Relations of Travellers broad 4<sup>to</sup> parchment': a parchment cover does in fact survive in conjunction with Workdiary 21, one of the handful of cover sheets that survive.<sup>34</sup>

Equally interesting is the evidence that exists as to how Boyle intended to make use of the data that they contained. Thus his intention that the data, once collected, should be recycled is shown by the extent to which the entries were retrospectively endorsed, especially those in the more 'expansive' workdiaries dating from the period from c. 1660 onwards. To some extent, this took the form of retrospective numbering, either in pencil or in ink, which is to be found in a high percentage of these workdiaries, and which clearly served reference purposes for Boyle, as for us in retrospect. Boyle's deployment of these numbers is illustrated by various surviving indices to workdiaries, notably 21 and 29, which are tabulated in detail in appendix 1, below. In addition, in

33 *Works*, vol. 14, pp. 337–40. It might have been hoped that these inventories would provide evidence concerning workdiaries that are now lost, but the descriptions are usually too general for conclusions to be drawn. The same is true of items in the lists by Henry Miles described in the previous chapter.

34 *Ibid.*, p. 347. For surviving cover sheets, see Workdiaries 19, 21, 22, 24 and 28: that noted in relation to 19 and 24 is preserved between them, and it is not clear to which it belongs.

many cases entries are annotated with a brief and sometimes quite telling note of their content. This starts in the first of this group of workdiaries, Workdiary 19, dating from c. 1662–5: it is perhaps significant that the title of this document alludes to the reuse of data in it, indicating that its entries are ‘to be Hence transferr’d to the Severall Treatises whereto they belong’ (Plate 3). Entry 2, for instance, is endorsed ‘Weight of the Atmosphere’, entry 5, ‘growth of mint in water’, and entry 6 ‘Lime of Flints’. Many of these labels are purely descriptive, as in entry 20a, ‘Experiment Magneticall’; others are mildly evaluative, as in entry 10, ‘odd salt of [vitriol]’; while some have titles making them sound like recipes, as in entry 11, ‘To Colour Iron’.

There are also occasional cross-references to other entries on related subjects, while in other cases entries are endorsed with the writings by Boyle to which they were deemed relevant. This is again a practice that begins in Workdiary 19, where entry 7 is endorsed ‘Temperat. of Subt. Regions’, an allusion to ‘Temperature of the Subterranean Regions’, published as part of *Cosmical Qualities* in 1670.<sup>35</sup> Similarly, entry 34 is endorsed ‘Antiperist.’, evidently referring to ‘An Examen of Antiperistasis’, published as part of *Cold* in 1665,<sup>36</sup> while the note by entry 55, ‘To Ess. the VIth’, probably alludes to one of the essays in Boyle’s *Usefulness of Natural Philosophy*.<sup>37</sup> These notes are often accompanied by marks such as crosses or stars which evidently served tabulatory purposes for Boyle that are now obscure, while the entries are frequently marked ‘Transcribed’.

As this implies, the data clearly was reused. Passages from the workdiaries often appear almost verbatim in writings by Boyle, and it is plausible that others which sound comparable but which cannot be traced there came from similar sources that are now not extant. The special significance of the reports that Boyle received from travellers and others for his more speculative works from the early 1670s has already been noted, but with his experimental treatises, too, it seems clear that many accounts of experiments derived from sources of this kind, either extant or lost. In many cases an extant workdiary can be explicitly linked with a passage in Boyle’s published writings, as in *The Producibleness of Chymical Principles* (1680), where Boyle quotes in square brackets an entry from Workdiary 19 with the note, ‘About which Experiment I find this short memoriall among my *Adversaria*’.<sup>38</sup> In other instances, on the

35 *Works*, vol. 6, pp. 321–41.

36 *Works*, vol. 4, pp. 459–98.

37 This seems likelier to be essay 6 as planned in the synopsis of *Usefulness* dating from 1666 published in *Works*, vol. 13, pp. lxi–lxx, ‘That the Naturalist may much advantage Men by exciting & assisting their Curiosity to discover, take notice, & make use of their homeland Riches & advantages of particular Countreys, & to increase their Number, (by transferring thither those of others)’, than essay 6 of the 2nd Tome as published in 1671 (*ibid.*, vol. 6, pp. 507–40).

38 *Works*, vol. 9, p. 68; Workdiary 19–96. For other linkages between passages in Boyle’s published works and extant workdiaries, see the ‘tables’ in *Works*, *passim*.



other hand – for example, in his *Experiments and Considerations about the Porosity of Bodies* (1684) – Boyle states that an account of an experiment was derived from ‘one of my Note Books’ although it does not actually survive in an extant workdiary, thus evidently providing clues as to the content of workdiaries that are now lost.<sup>39</sup> Earlier such statements are to be found in works published in the mid 1660s, as in *New Experiments and Observations touching Cold* (1665), where Boyle notes of the accounts of certain experiments included there that ‘for the most part ... I find them, in a kind of Note-book, wherein I had thrown them for my own private use’, while at one point in *The Origin of Forms and Qualities* (1666) he annexed ‘the Transcript of an entry, that I find in a Note book’.<sup>40</sup> Indeed it is worth speculating that the low survival rate of workdiaries from the early 1660s could be partly due to the fact that their content was disproportionately recycled as part of the profuse treatises that Boyle published at that point.

A clue as to how this process worked is possibly provided by the survival of copies of entries from extant workdiaries on separate sheets of paper, which may have been made in order for them to be intercalated into the manuscript text of Boyle’s writings. An instance of this may be adduced from a work by Boyle that survived only in manuscript until published in volume 13 of the new edition of the *Works*, his *Of Subterranean Steames. As they are capable of affecting the Aire*. For included in this are a series of nuggets of information copied onto separate sheets of paper: though none comes from an extant workdiary, it seems highly likely that they derive from examples of the genre now lost.<sup>41</sup> The same is probably also true of comparable, paragraph-length examples that Boyle gives in published works of which the manuscript no longer survives. In addition, we occasionally find a group of recopied materials relating to a specific work, for instance a group of extracts relating to the *General History of Air* now in BP 38, fols. 95–6 (Plate 6), while more miscellaneous groups of recopied material may have a significance which has as yet eluded us. An account of these is given in appendix 2, below.

A more ambitious scheme by Boyle to collect and process the data that he had accumulated in the workdiaries and comparable sources is represented by his *Paralipomena*, which is considered at length in the next chapter. It seems that from the 1660s onwards Boyle had plans to supplement the content of works that he had either written or published, and various schemes for this survive, starting with a number of versions of a list entitled ‘The Order of My Severall Treatises’ (Plate 4): the link of this with the workdiaries is clear from the fact

39 *Works*, vol. 10, pp. xix, 127, 135, 146–7.

40 *Ibid.*, vol. 4, pp. 263–4; vol. 5, p. 524; vol. 6, p. 25. See also vol. 12, p. 156.

41 *Ibid.*, vol. 13, pp. 403ff. See particularly BP 21, pp. 93, 95, 109, 111, 117, 133–5. The same is true of one passage in Boyle’s *Memoirs for the Natural History of Tin*, *Works*, vol. 14, pp. 133ff., on pp. 141–2 (BP 28, p. 87): other passages, however, have been incorporated under the headings which make up the work.



that one version of it survives in juxtaposition with a workdiary, as also from the fact that one workdiary is apparently partially endorsed with the number code from 'The Order'.<sup>42</sup> Such plans continued with the elaborate scheme represented by *Paralipomena*, with its contents lists and introductory material, which is analysed in full in chapter 4. There are even some sections of text entitled as belonging to this work, which are there printed in full, and, as we shall see, Boyle seems to have aspired to sort the material from his workdiaries by having items recopied. In practice, however, he does not seem to have got very far with the process, and it seems likely that the task defeated him because of the scale and complexity of the data involved.

### In Electronic Form

Yet this is precisely where modern electronic technology can help, and it is not least for this reason that the version of the workdiaries that was published in 2001 and is now available at <<http://www.livesandletters.ac.uk/wd>> in a revised, fully illustrated edition, is in electronic form. This gives an ability to search for words and hence for data on a specific topic, which can then be extracted and recombined thematically, thus producing a kind of 'virtual' version of what Boyle evidently aspired to in *Paralipomena*.

By way of background, readers need to be aware of the history of the research project as a result of which the workdiaries were identified, tabulated, transcribed and elucidated, thus making possible both the conclusions about them summarised in this chapter, and also their publication. This was paid for by a generous grant from the Wellcome Trust over the period 1998–2001, which enabled Charles Littleton to prepare a definitive, annotated text of the corpus of the workdiaries, as determined and defined by Michael Hunter's prior investigations, and then to render it into TEI-XML (that is XML using a version of the TEI DTD).<sup>43</sup>

The original version of the online edition was designed and executed in the latter stages of the Wellcome-funded project, with advice from Lou Burnard, one of the architects of the Text Encoding Initiative, and members of the Oxford Text Archive. In addition, comparable editions such as the Bergen

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42 See Boyle, *Works*, vol. 1, pp. xxxiv–xxxv; vol. 14, pp. xl–xli, 331–2; Harriet Knight, 'Organising Natural Knowledge in the Seventeenth Century: The Works of Robert Boyle' (Ph.D. thesis, University of London, 2003), pp. 115–17.

43 Readers who are unfamiliar with computing technology need to know that TEI-XML means Extensible Mark-up Language, using a set of encoding categories recommended by the Text Encoding Initiative, an enterprise jointly set up in Chicago and Oxford in the late 1980s, and set out in their Document Type Definition (DTD). Readers will also need to recognise further acronyms which will be used in this section: HyperText Mark-up Language (HTML), Extensible Stylesheet Language Transformations (XSLT) and Extensible HyperText Mark-up Language (XHTML).

edition of the *Nachlass* of Ludwig Wittgenstein were studied, and advice was given by members of the Max Planck Institut für Wissenschaftsgeschichte at Berlin, particularly Brian Fuchs, and by the Perseus Project at Tufts University, both of which had experience of similar types of publishing. The edition went online in autumn 2001, located on the Robert Boyle website at Birkbeck College, forming a substantial subsection of the website with its own index page.<sup>44</sup>

The Birkbeck edition of the workdiaries was built and organised in the following manner. Each workdiary was made into a separate XML file, after which, using XSLT stylesheets, each of these XML files was converted into two HTML files. When viewed on the web these files showed the text of a whole workdiary, which could be scrolled through in its entirety. The individual entries were clearly separated and annotated within the larger workdiary web 'page', thus respecting Boyle's conception of the entries as the basic units of the corpus. The reason for having two HTML files for each workdiary was to enable the text to be read in two different ways. The first was a 'diplomatic' version in which all the textual additions, deletions, alterations and replacements were shown in full in the on-screen text, with deletions and alterations recorded in square brackets and insertions in angled ones.<sup>45</sup> Accompanying this, and linked to it, was a 'normalised' version in which these textual emendations were not visible, so that the text could be read unencumbered in its final form. However, the places where such changes occurred were marked by hypertext links to the relevant section of text in the diplomatic version: these were indicated by the word in question being shown in red (the presence of deleted words was denoted by the inclusion of a small 'd' in square brackets). There were also links from the diplomatic text to the normalised. Thus readers could easily switch back and forth between the two versions of the transcription. The idea of having these two versions, and the terminology used (diplomatic and normalised) was initially inspired by work then in progress on the XML version of the Wittgenstein Archives at the University of Bergen.<sup>46</sup> Each version also had hypertext links – shown by the

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44 It has now been archived and is available on the researchers' page of the Boyle website, <<http://www.bbk.ac.uk/boyle/workdiaries>>. It is worth noting here that, as an experiment, a subsidiary version was also placed on the website of the Perseus Project, <<http://www.perseus.tufts.edu>> However, because of the need to comply with the house style of the Perseus Project, this had certain drawbacks compared with the Birkbeck edition. For instance, the general notes on each workdiary were suppressed, and there was no mechanism for scrolling through the text as against opening each entry separately. Although a search mechanism was provided, it proved somewhat erratic.

45 The editorial method used was developed from that expounded in Michael Hunter, 'How to Edit a Seventeenth-century Manuscript: Principles and Practice', *The Seventeenth Century*, 10 (1995), 277–310.

46 For the Wittgenstein website see <<http://www.aksis.uib.no/wab>>. The version consulted when the Boyle edition was in preparation has now been archived at <<http://www.aksis.uib.no/1990-99>>.

word in question being highlighted in blue – to a biographical register, a file which provided information on those people mentioned in the workdiaries who could be positively identified. In addition to reaching an entry in the biographical register by clicking on the highlighted name of a person in a workdiary entry, readers could also access the biographical register directly.<sup>47</sup>

Readers were able to navigate their way within the corpus of the workdiaries by a table of contents based on a synopsis of the workdiaries as a whole, which gave basic information about the content, length and other features of each: a version of this appears as the table preceding the appendices at the end of this chapter. Also provided was introductory material, both general and specific. An abbreviated version of this chapter was included as a general introduction, accompanied by a bibliography and technical notes on the edition. There were also general editorial notes for each workdiary, with which the reader was presented at the beginning of the workdiary web page. These gave a brief summary of the character and content of the workdiary. They also included information on the workdiary's location in the Boyle Papers and Manuscripts at the Royal Society, its physical format and length (in terms of the number of entries), its approximate date of composition and the languages and handwriting of the entries. There were also editorial comments on particular features of the text, and on problems caused by erratic numeration and the like. Individual notes were also provided for each separate entry, providing information on its Boyle Papers reference, hand and approximate date, and any other matter relevant to that specific section of text.

Having gone live at the end of 2001, the Birkbeck edition attracted many users – despite suffering from the lack of 'visibility' compared with print publications that is a general problem for electronic editions. However, the rapid pace at which change occurs in information technology meant that it quickly became apparent that the workdiaries edition was not taking full advantage of its XML format. The principal shortcoming was a lack of an engine by which to do word searches. In addition, the links between the two versions of each workdiary, although effective, required the reader to do a good deal of switching back and forth between separate HTML files which could sometimes take a long time to download. Finally, the original edition comprised text only, whereas it was becoming increasingly common for online editions to take advantage of the potential afforded by electronic media to offer readers facsimiles of the original manuscripts in parallel with a transcription of them.

In 2003, therefore, it was agreed that responsibility for the edition would be transferred from Birkbeck to the Centre for Editing Lives and Letters (CELL)

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47 Research assistance on the biographical register was provided by Ben Coates. In addition, Lien Bich Luu helped in checking the texts of the edition. Assistance with the revised edition was provided by Peter Forshaw.



at Queen Mary, University of London, where it could be significantly upgraded in an environment specifically devoted to the provision of electronic texts of the highest quality. CELL is a centre set up by the Arts and Humanities Research Board which is devoted to the promotion of good practice in the editing of early modern texts, and the Boyle workdiaries became a pilot project for its website. The Wellcome Trust generously made a further grant to upgrade the edition, in conjunction with a parallel project funded by the Heritage Lottery Fund entitled 'Robert Boyle for the 21st Century' (in which the partners were Birkbeck, the Royal Society and Access to Archives), which was devoted to making digitised resources relating to Boyle available online. Thanks to these grants, the original manuscripts of the workdiaries were digitally scanned and edited to accompany the transcribed texts. At the same time, the opportunity was taken to enhance and upgrade the edition of the workdiaries: the original XML files were 'cleaned up' and overhauled over many months and new stylesheets applied to provide a different interface. In addition, the biographical register was revised and extended and further editorial resources were provided to supplement it, in the form of a register of place-names spelled in unfamiliar ways, and a register of Boyle's references to his own writings, in both cases linked by hypertext to the places in the text where the words in question appear. This work was executed by Dr Alison Wiggins and Dr Jan Broadway at CELL, and by Stella Wong, the research officer on the project, who was based at Birkbeck.

The CELL edition of the workdiaries went live in December 2004, and it displays the following features. The original XML files were each converted into eight different XHTML files for each workdiary.<sup>48</sup> (XHTML has now become the standard encoding language for websites, but it was just becoming accepted when the initial project was reaching its conclusion.) The site still centres on two versions of each workdiary – one diplomatic, the other 'editorial'. This word has been chosen in preference to the term 'normalised', used in the original edition, to avoid the implication that spelling, punctuation, and the like have been changed to make them more consistent or 'normal'. In fact, the 'editorial' workdiary presents a version which is completely faithful to the original other than 'editing out' components of the text that remain in the original manuscript although cancelled by the author because he wanted them to be removed in the final version. In addition, the CELL edition has been built to be in line with current web-accessibility standards and incorporates dynamic features and enhanced navigational facilities. In the 'editorial' version of the file, the reader has only to pass his or her mouse over a highlighted word to see a pop-up window showing the alteration in the original manuscript. The reader does not have to switch back and forth continuously between versions,

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48 The content and type of these is enumerated on the Technical Policy page of the CELL website, <<http://www.livesandletters.ac.uk/wd/editorial/technical.html>>.



although that option is also available for those lacking access to the software required to operate mouseovers.

Perhaps the most striking feature of the new edition is the provision of a full set of digital images of the original manuscripts in full colour, with each page linked to the transcribed version of the relevant section of the text. This means that the reader can examine the transcript and the original manuscript side by side on the screen. Hardly less important, however, is the search engine that has now been provided. When the reader submits a word or combination of words, he or she is presented with the sections of text in the workdiaries in which the selected word(s) appear, together with links to the actual workdiary text so that the passages can be seen in context and/or facsimile. There are accompanying notes alerting users to spelling variants and the like to assist them in searching. By using this search engine, the reader can collate information from different workdiaries by topic or theme, thus making it possible to create a kind of surrogate of what Boyle evidently aspired to in his *Paralipomena*.

In all, the edition is at the cutting edge of the new electronic technology. Presented in this form, the workdiary corpus should contribute in a whole range of ways to a fuller understanding of Boyle's experimental practice and of the evolution of his ideas. This is truly a case of twenty-first-century expertise and technology adding a new dimension to our knowledge of a long-dead figure.

The Workdiaries of Robert Boyle

<i>Hunter and Littleton reference</i>	<i>Title, nature and content of MS; actual dates in MS; names of informants where appropriate</i>	<i>Boyle Papers reference (Royal Society)</i>	<i>Boyle's numeration in workdiary [total number of entries]</i>	<i>Approx. date of workdiary</i>	<i>Hand(s) of MS</i>
1645–1649					
1	‘Diurnall Observations, Thoughts & Collections. Begun at Stalbridge April 25th 1647’, aphorisms etc. in English and French, largely from Gaultier de Costes’s romance <i>Cassandre</i>	BP 44, fols. 94–107	None [297 entries]	1647	early Boyle
2	Aphorisms in French, largely from Bk 1 of Gaultier de Costes’s romance <i>Cassandre</i>	BP 44, fols. 108–13	None [70 entries]	1647	early Boyle
3	Aphorisms in English, preceded by the heading ‘L.D’	BP 44, fols. 114–16	None [34 entries]	1647	early Boyle
4	‘A Diurnall Miscellaneous Collection, Begun March the 25th 1648/9’, aphorisms in English, largely from <i>Parthenissa</i> , by Roger Boyle, Lord Broghill	BP 8, fols. 118–22; BP 3, fol. 146r	None [258 entries]	1649	early Boyle
5	Miscellaneous excerpts and entries, largely consisting of further aphorisms and passages for philosophical and theological works; no dates supplied	[replacement version of first page] BP 2, fol. 186; BP 3, fol. 90 BP 3, fol. 95 BP 36, fol. 86v	None [15 entries]	late 1640s	early Boyle
1650–1654					
6	‘Memorialls Philosophicall Beginning this Newyears day 1649/50 & to End with the Year’, medical recipes in English, mostly from Benjamin Worsley, with two from Gerard Boate	BP 28, pp. 309–12	None [15 entries]	1650	early Boyle

<i>Hunter and Littleton reference</i>	<i>Title; nature and content of MS; actual dates in MS; names of informants where appropriate</i>	<i>Boyle Papers reference (Royal Society)</i>	<i>Boyle's numeration in workdiary [total number of entries]</i>	<i>Approx. date of workdiary</i>	<i>Hand(s) of MS</i>
7	Medical recipes in Latin from, among others, George Starkey (including a recipe relating to his <i>ens veneris</i> ), Johann Morian and Gerard Boate	BP 25, pp. 341–2	None	1651	early Boyle
8	'Memorialls Philosophicall. Beginning this First day of the Yeare 1651/2', but later date in title header suggests it could have been continued in 1654; medical recipes from George Starkey, Gerard Boate, etc.	BP 25, pp. 343–6	[10 entries] None [14 entries]	1652 (and 1654?)	Boyle early Boyle
9	Medical and chymical recipes in English from, among others, Benjamin Worsley, Frederick Clodius, the Earl of Pembroke and Thomas Smart	BP 25, 347–58	None [108 entries]	1654?	early Boyle
10	Medical recipes in Latin from, among others, Sir Kenelm Digby, Théodore Turquet de Mayerne and 'Dr Shouart'	BP 25, pp. 359–62	None [25 entries]	early 1650s	early Boyle
11	Medical recipes, mostly in French, some with English commentary. Informants and sources not noted.	BP 30, fols. 425–8	None [13 entries]	early 1650s	early Boyle
1655–1659					
12	'A Philosophicall Diary, Begun this First of January 1654/5', recipes with marginal dates ranging from 'Jan 9' to 'Febr 9'. Informants include George Starkey, Frederick Clodius, Sir Kenelm Digby	BP 8, fols. 140–8	1–100 [104 entries]	1655	uncertain
13	'Promiscuous Observations begun the 24th of September 1655', recipes, with marginal dates ranging from 'September 24th' to 'December 6th'. Most are recipes from Sir Kenelm Digby.	BP 25, pp. 153–6, 177–83	1–41 [42 entries]	1655	P, Boyle [1 entry]
14	'A Private Philosophical Diary Begun this First Day of January 1655/6', recipes in English, with marginal dates ranging from 'January 3' to 'February the 8th'. Informants and sources not noted.	BP 25, pp. 157–60	1–16 [17 entries]	1656	P
15	'Philosophicall Collections begun the 12th of September 1656', recipes in English, with dates ranging from 'September 12th:' to 'June 8th 57 Oxo:'. Informants and sources not noted.	BP 25, pp. 173–6, 165–72; BP 26, fols 96–9	1–61 [64 entries]	1656–7	P, uncertain [1650s hand?]

<i>Hunter and Littleton reference</i>	<i>Title; nature and content of MS; actual dates in MS; names of informants where appropriate</i>	<i>Boyle Papers reference (Royal Society)</i>	<i>Boyle's numeration in workdiary [total number of entries]</i>	<i>Approx. date of workdiary</i>	<i>Hand(s) of MS</i>
16	'My Private Philosophicall Diary Begun this First of Jan. 1656/7', recipes in English, with marginal dates ranging from 'Jan. 1' to 'Jan 8th'. Informants and sources not noted.	BP 25, pp. 161–4	1–15 [15 entries]	1657	P
17	'A Philosophicall Diary begun Sept. The 20th', recipes, with marginal dates ranging from 'Sep. 20th' to 'October 24'. Only informants noted are Joachim Polemann and Henrik Le Roy.	BP 26, fols. 1–2	1–4 [17 entries]	late 1650s	uncertain
18	Chymical recipes, mainly involving metals and their transmutation. Includes 'Cardans worke to Reduce the Rhenish [gold] into hungarian [gold]'. Informants and sources not noted, apart from Girolamo Cardano and 'John Burkart'.	MS 193, fols. 1–10	1–13 [31 entries]	late 1650s	uncertain
1660–1664					
19	'Philosophicall Entrys & Memorials (of all sorts), Here confusedly throwne together to be Hence transferr'd to the severall Treatises whereto they belong', various experiments and observations, with marginal dates including ('May 22. 64' (p. 39), 'Jun 8. 1664, (p. 42), 'July 25. 64' (p. 42), 'Sept. 21. 64' (p. 41), 'July 15. 1665' (p. 44)	BP 22, pp. 1–56	1–119 (1–99 later altered to 501–99) [128 entries]	1662–5	F, E, H
20	'A Continuation of Physiologicall Entryes from the IXth of July', experiments and observations involving oil of vitriol, turpentine, a 'venereal gum', etc., with marginal dates ranging from 'July 9th' to 'July 10th'	BP 18, fols. 94–5	1–8 [8 entries]	early 1660s	E
1665–1669					
21	'Promiscuous Experiments, Observations & Notes', recipes, accounts of experiments and reports of phenomena from travellers and virtuosi, with marginal dates including 'October 2d 1661' (p. 19), 'June 1659' (p. 19), 'June 29th 1660' (23), '1670' (pp. 57, 69), 'May 8th 1668' (p. 155). Includes recopied entries by Bacon.	BP 27, pp. 1–159	201–720 (numbering jumps from 424 to 501) [501 entries]	late 1660s/very early 1670s	E, F, G, J, K, Q, R, Slare, Bacon, others



<i>Hunter and Littleton reference</i>	<i>Title; nature and content of MS; actual dates in MS; names of informants where appropriate</i>	<i>Boyle Papers reference (Royal Society)</i>	<i>Boyle's numeration in workdiary [total number of entries]</i>	<i>Approx. date of workdiary</i>	<i>Hand(s) of MS</i>
22	'Promiscuous Addenda to my severall Treatises' (fols. 63–91) and 'A Continuation of (Printed) Addenda to my severall Treatises' (fols. 92–116), transcriptions of sections of books, mostly on geographical and natural phenomena. Dates mentioned within extracts include 1665 (fols. 82–4) and 1669 (fols. 94, 102v). Includes later material in hands of Greg, Bacon.	BP 8, fols. 65–116	1–200 (numbering is out by 10 from entry 77) [222 entries]	late 1660s/early 1670s	E, F, G, Q, R, Slare, Greg, Bacon unidentified
23	'A Continuation of C[hemical] Notes Sept. the 29th', chymical recipes, with additional notes and significant alterations by Boyle, with marginal dates including 'Feb the 9th' (p. 73), 'Febr. 21' (p. 92)	BP 25, 71–4, 87–94	None [80 entries]	late 1660s	E, R
24	'Physiologicall Notes, Begun the 25th of January', accounts of phenomena related to Boyle by travellers and virtuosi. One entry mentions plague of 1665 (p. 72) and marginal dates include 'Jan. 19' and 'Jan. 21'.	BP 22, pp. 61–74	None [9 entries]	late 1660s	H
25	'Loose Experiments, Observations & Notes about The Preservation of Bodies', experiments involving the preservation of caterpillars, milk and cream	BP 27, pp. 219–20	None [2 entries]	late 1660s	F
26	Accounts of cures performed by Valentine Greatrakes during his visit to England in 1666, some witnessed by Boyle himself and some recounted to him by those healed. Marginal dates range from 6 to 15 April.	British Library Add. MS 4293, fols. 50–3	None	1666	E, F
27	Chymical recipes and aphorisms from a disbound notebook of the late 1660s	BP 44, fols. 43–9	None [53 entries]	late 1660s	Boyle
1670–1674					
28	'The last bundle {save one} of Physiological Memorandums', aphorisms and memoranda to be used in writing various (mainly unpublished) essays, referred to by abbreviated titles in the margin. Marginal dates include 'June 25' (fols. 148, 150), '25 Oct.' (fol. 153), 'Jan 1 '74' (fol. 154), 'May 29' (fol. 161v).	BP 17, fols. 147–63; BP 38, fol. 42	801–1000 [207 entries]	early 1670s (c. 1673–4)	Slare, Warr, uncertain

<i>Hunter and Littleton reference</i>	<i>Title; nature and content of MS; actual dates in MS; names of informants where appropriate</i>	<i>Boyle Papers reference (Royal Society)</i>	<i>Boyle's numeration in workdiary [total number of entries]</i>	<i>Approx. date of workdiary</i>	<i>Hand(s) of MS</i>
29	Accounts of experiments and observations, including 'A long & manifold Hydrostatical Experiment', and experiments involving magnetism, luminosity, etc. First page starts in mid entry, suggesting that the beginning of the workdiary is missing. Marginal dates include 'May 22' (p. 188), 'July 5th' (p. 195), 'Decem. 27' (p. 233), 'Jan 5th' (p. 233), 'Febr 7' (p. 235), '15 Novemb.' (p. 241). Entries from two short workdiaries from the early 1670s: (1) meteorological observations concerning temperature and pressure; (2) experimental accounts concerning pendulums, oils and fermentation.	BP 27, pp. 179–96, 211–18, 221–53	214–300 (215–20 originally written 315–20; 281–94 originally written 1–14) [95 entries]	early 1670s	Slare, uncertain
30	Entries from two short workdiaries from the early 1670s: (1) meteorological observations concerning temperature and pressure; (2) experimental accounts concerning pendulums, oils and fermentation.	BP 10, fol. 21; BP 26, fols. 137–8	None [5 entries]	early 1670s	Slare
1675–1679					
31	Chymical recipes, some using code, others making reference to preparations made by such chymists as Paracelsus and George Ripley. Marginal dates range from 'August the 2d 78' to 'Nov: the 22'.	BP 28. pp. 337–40	None [8 entries]	1678	B, C
32	'Relationes Physicae continued', reports on phenomena from travellers and virtuosii, including an account of cold in Denmark. Informants include the 'overseer of the Duke of Orleans's famous Physic garden at Blois'.	BP 9, fols. 166–70	None [8 entries]	late 1670s	unidentified [Slare?]
1680–1684					
33	Miscellaneous chymical and medical recipes, mnemonic verses, accounts and memoranda	MS 194, fols. 1–25	None [50 entries]	early 1680s	Boyle, Bacon, Greg, Warr, B, C, uncertain

<i>Hunter and Littleton reference</i>	<i>Title; nature and content of MS; actual dates in MS; names of informants where appropriate</i>	<i>Boyle Papers reference (Royal Society)</i>	<i>Boyle's numeration in workdiary [total number of entries]</i>	<i>Approx. date of workdiary</i>	<i>Hand(s) of MS</i>
34	'Chimical Notes Continued from December', chymical recipes, many in code and with significant alterations in an unknown hand. Marginal dates include 'Jan. 15' (p. 54), 'Ap 16' (p. 59), 'May the 11' (p. 65), 'June 17' (p. 67), 'July the 5th' (p. 70). First few pages severely burned, possibly by acid.	BP 25, pp. 51–70	None [91 entries]	early 1680s	Slare, Warr, unidentified, Boyle
35	'Chimical memorandums continued from January 25', chymical recipes, many in code and with alterations in an unknown hand, with marginal date 'March 1' on p. 77	BP 25, pp. 75–86	None [53 entries]	early 1680s	Slare, Warr, unknown
1685–1691					
36	Accounts of conversations with travellers on natural phenomena. Informants include Sir John Chardin, Sir Paul Rycaut, Robert Knox, Sir William Stapleton, Philip Warner, etc. Marginal dates range from 9 January 1685 to 23 February 1691.	BP 21, pp. 255–312	1–100 [122 entries]	1685–91	Greg, C, uncertain
37	'The XVI Century', experimental notes and accounts, many concerning the specific gravity of various materials. Marginal dates range from 29 December 1686 to 5 February 1690.	BP 21, pp. 191–218	1–100 [112 entries]	1686–90	Greg, Smith, uncertain
38	'The XVII Century' and 'The XVIII Century', experimental accounts and observations, many concerning the specific gravity of various substances. Marginal dates range from 5 June 1686 to August 1691.	BP 21, pp. 219–54	1–130 (entries 101–30 originally written as 1–30) [145 entries]	1686–91	Greg, Smith, C, uncertain
39	'Distinguish'd Experiments Or more Private Observations Continu'd from [Septem]ber 29th 1688/9', experimental accounts and observations, including a way to measure the relative sizes of landmasses	BP 26, fol. 3	None [5 entries]	1689	Bacon, C
40	Two short workdiaries from the 1680s: (1) a single long experimental account with an elaborate title: (2) extracts from Galen and Aristotle on medical topics.	BP 21, p. 142; BP 38, fol. 24	None [3 entries]	1680s [late?]	Bacon, Greg

## Appendix 1

### Indexes to the Workdiaries

Within the Boyle Papers are various documents which appear to be indexes to workdiaries. These are as follows: BP 10, fols. 113–14, and especially fol. 114v; BP 27, pp. 161, 164–5 and 197–209; and BP 35, fols. 127–8. These comprise sheets of paper which have generally been formed into tables by having pencil lines vertically drawn on them to form a series of pairs of columns, sometimes two, sometimes four, sometimes also with lines across the page to form a grid. In the left-hand column of each pair, a series of numbers (or occasionally letters) has been inserted. In many cases, the adjacent column is blank, but the intention was evidently that it would be filled by data relating to the number in the adjoining column, and in some instances this has been executed. Where it has occurred, the data added appears to relate to the content of entries in workdiaries, and in certain cases where all or part of the relevant workdiary exists, it has proved possible to confirm this.<sup>49</sup> We will here go through the items in question giving a description of each.

#### **BP 10, fols. 113–14**

The bulk of this folded foolscap sheet – the recto and verso of fol. 113 and the recto of fol. 114 – is given over to a list of titles in hand E, each accompanied by a series of numbers. The column in which the titles occur occupies about a quarter of the page, and is separated from the rest of the page by a fold in the leaf (but with no line drawn). The titles are similar to those used in Boyle's 'The Order of My Severall Treatises' of c. 1665, and numbers given beside each are from a series of 137, probably indicating numbered entries deemed relevant to the treatise in question: the numbers could be of entries in a workdiary, though it has proved impossible to correlate them with any extant example. For further discussion of this document, see below. p. 183.

On the verso of fol. 114 are pencil notes written in a single series across the upper part of the page in Boyle's hand, mostly in the right-hand section of the page formed by the fold, but with slight spillage to the left. They comprise numbers accompanied by brief notes which appear to identify either a topic or a title: it seems likely that the numbers denote entries, and that the notes are

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49 See also the discussion of this matter in Knight, 'Organising Natural Knowledge', ch. 2, esp. pp. 114 (BP 27, p. 161) and 115 (BP 27, pp. 179–209).



therefore of the topics they dealt with or the works to which they were deemed relevant. The titles cover a similar range to those used in endorsements to the workdiaries themselves. For instance, we find such instances as ‘98 Improb. Truths’ or ‘116 Colors’. Topics include ‘56 Porcellane’, ‘85 Sowing of Oysters’ and ‘120 Water that fattens’. Probably, this is a listing of the content of a workdiary, but, if so, the workdiary in question is not extant. It is conceivable that we have here a record of the content of a lost section of Workdiary 21, of which the extant section commences at entry 201.

### **BP 27, p. 161**

This document comprises a single leaf, the verso of which (p. 162) is blank. It consists of a list of the numbers 201 to 250 presented in a ruled table comprising two pairs of unequal columns, a small one for the numbers and a larger one for the notes. Some of these are annotated with notes that correspond to the content of the relevant entries in the extant section of Workdiary 21, to which it is adjacent. These notes are in the hands of Boyle (nos. 201–22), Warr (nos. 223–32) and Bacon (no. 236). In many cases, the notes exactly duplicate the marginal endorsements attached to the entries (for example ‘213 Distance of Clouds’), though in other cases they represent a variant of this (for instance ‘216 Od Ignis fatuus\*’ for ‘Relation of an Ign F. \*’). In other cases, a summary is given where none is given in the workdiary, as with ‘227 Hygroscope with a Sponge’ or ‘232 Odd Condensation of Air by Cold’: in each case, these titles provide a reasonable summary of the content of the entry in question. In other cases, entries are given the title of a work by Boyle, as in ‘204 H[istory] of Air’ or 206 ‘H[istory] of Blood’, while other entries have ‘Var’, perhaps denoting relevance to various works, or ‘q’, evidently denoting Boyle’s uncertainty. In total, only 24 of the 50 numbers listed are annotated. It has not been possible to establish why only certain entries are cross-referenced.

### **BP 27, pp. 164–5**

This double-page spread is headed ‘An Index belonging to the flower pot booke’; p. 163 (the recto of p. 164) and p. 166 (the verso of p. 165) are blank. Each page is divided into four unequal columns, the left-hand of each pair being narrower than the right-hand, with lines being drawn across each to form a grid. The left-hand columns on p. 164 have a series of letters from A to U, while those on p. 165 have numbers 1 to 32. The right-hand columns on both pages are entirely empty, as is part of the second left-hand column on p. 164. For further discussion, see below, pp. 182–3.

**BP 27, pp. 197–209**

This is an index to Workdiary 29, which is interspersed by it: in other words, the first part of the workdiary, comprising entries 212–37, occupies BP 27, pp. 179–96, while entries 238 onwards continue from p. 211 (the workdiary is incomplete, lacking the entries before 212 and the start of that entry). The pages of the index are misbound, and the correct order is 204, 201, 200, 197, 205, 208, 209; pp. 199, 202–3, 206–7 and 210 are blank, and p. 198 is blank other than being drawn up with pencil columns. Each page with text on it has two pairs of columns with numbers in the left-hand one; the right-hand column sometimes contains brief notes and is sometimes blank. The numbers covered are 1–281 (pp. 204, 201, 200); 276–300 (p. 197: partially overlapping with p. 200; much of the page blank); 601–770 (pp. 205, 208), and 801–53 (p. 209; partly blank). Many of these have endorsements in the adjacent column, though nos. 65–200 do not. Much of the text is in the hand of Slare, with occasional passages by Boyle.

In the sequence where the index parallels the survival of entries from Workdiary 29, nos. 214–300, enough short-title annotations survive to confirm that it is an index to that document: for example, nos. 215, 225 and 228, all endorsed ‘Magnet’ in the index (p. 200), correspond to entries which do indeed discuss magnets in Workdiary 29. As with BP 27, p. 161, descriptions of the content of entries alternate with notes of the works to which Boyle deemed them relevant, including ‘Antiper’ (nos. 261, 262). There also appears to be a numerical code in use in this index, with many entries annotated with single or multiple numbers from the range 15, 25, 35 and 48–56. An attempt to find common features in the entries keyed to 48 and 54, the most common in the range 214–300, did not prove conclusive. Apart from noting that those labelled ‘48’ tended to be chemical experiments, while those labelled ‘54’ tended to emphasise colour in their descriptions, no clear generalisation is possible. The presence of two sets of annotation to the numbers 276–81 (these appear at the end of the sequence on p. 200, where they are crossed through, and again on p. 197 at the start of a sequence from 276 to 300) similarly hints at a solution to the number code; those marked ‘42. 54’ on p. 200 are all referred to on p. 197 as ‘Mat. Med.’ (that is, Boyle’s ‘Materia Medica’). In the absence of further evidence, however, this remains inconclusive.

The length of this index suggests that far more of Workdiary 29 is lost than survives. The endorsements to numbers elsewhere in the sequence therefore provide clues as to certain of the missing entries, as, for example, ‘63 good vitriol. Earth’, ‘614 oils of Amber’, ‘636 shining wood in water’, ‘645 little sylver on Lead’, ‘660 metal in water’ or ‘698 strange saphyrs’. It seems likely that it was primarily chemical in focus. Many numbers are endorsed with the titles of the works which Boyle considered cognate to the entries to which they related, for instance ‘Cold’ (pp. 200, 209) or ‘Aire’ (p. 209). Other formulae that

recur are perhaps to be seen similarly: for example, 'Mat. Med' (see above) or 'Grav. & Levity' (p. 205). In addition, here, as in the section overlapping with the extant section of the workdiary, numerical codes are heavily used.

### BP 35, fols. 127–8

This is a further document comprising foolscap sheets folded to form a pair of leaves, each with two pairs of columns on it. It is thus similar to the previous item, except that there the reverse of each leaf was blank, whereas here each is used on both sides. It should be read as if an unbound sheet, with fol. 128v coming first, followed by fol. 127r and then fols. 127v and 128r. It lists nos. 1–200 (fols. 128v, 127r) and 301–500 (fols. 127v–128r). Up to number 32, all entries but 23, 27 and 28 have pencil short-title and numerical annotations, most commonly to 'E & O P' (i.e. *Experimenta et Observationes Physicae*). Otherwise 101–200 (only, and with the exceptions of 152–3 and 185) are annotated, here in ink, with a mixture of descriptions of the content of entries, numbers (here only 54 or 55), and the letter 'q', as seen above. The annotations are in the hands of Boyle (nos. 1–32 and 101–25) and probably Warr (126 to end).

If this list is compared with BP 27, pp. 197–210, it may be suggested that this, too, is an index to Workdiary 29, partially dovetailing with that in BP 27, covering nos. 101–200 and 301–500 while that covers 201–300 and 601 onwards, though they both cover nos. 1–100.<sup>50</sup> Comparison of the annotated index to nos. 1–32 surviving on BP 35, fol. 128v, with the matching annotated series in BP 27, fol. 204, reveals a considerable degree of overlap, especially in references to 'E & O P', though also some discrepancies, due perhaps to Boyle's not being sure how to categorise material. The notes on nos. 101–200 could also relate to the missing section of Workdiary 29, and it is therefore worth quoting some of these here. A high proportion of them are chemical experiments – for instance the opening ones: '102 encrease of weight of tin', '103 the like in [iron]'; a later group includes '128 increase of Copper without melting' and '129 quick reduction of minium into Lead'; later still we have '181 Wine & spirit of [tartar]' and '187 Experiment of Petrol. with spirit of urine'. A minority, however, range more widely, as in '115 Experiment staticall of a mouse', '118 Experiment of coagulating humane blood' or '123 Air produc'd by Coralls'.

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50 However, the numbers are in a different hand. In addition, their format differs slightly, in that the BP 35 text has a horizontal line at the bottom of the page which is not present there in BP 27.



## Appendix 2

### Recopied Extracts as Evidence of Lost Workdiaries

As already noted, there are a number of reasons to believe that the extant workdiaries are only a part of what once existed, including the lacunae in the series, the evidence of Boyle's 1688 *Advertisement*, and the survival in Boyle's published writings of data described as 'from my Note Books' which reads as if it comes from workdiaries but is not found in any extant specimens (above, pp. 138–9, 150–1); there is also the evidence of the indexes discussed in appendix 1. Comparable evidence is provided by the survival among Boyle's manuscripts of recopied sections of text which sound as if they come from workdiaries but which are not now to be found among the corpus. Though one can only state that the material in question has the 'feel' of deriving from workdiaries, the likelihood that it derives from extant workdiaries that are no longer extant is increased by the fact that, in some cases, such extracts are adjacent to or interspersed with extracts that do come from workdiaries. A complete list of recopied material of this kind, including both passages that can be identified as coming from extant workdiaries and passages that do not, is included as the table following this appendix, while the most substantial group, which comprises the text of the only sustained section of Boyle's *Paralipomena*, is printed in the appendix to chapter 4, below. Here, the plausibility of such items deriving from parts of the corpus that is now lost may be illustrated by quoting a few further examples.

These may be divided into various categories. First, there are sheets of paper on which fair copies of various entries are transcribed in juxtaposition with one another. An example of this occurs within the workdiaries themselves, in that Workdiary 21 includes four leaves comprising copies in Bacon's hand of entries from elsewhere in the workdiary. A further example is provided by BP 38, fol. 94, a group of entries from Workdiary 21 copied in the hand of Frederick Slare. A comparable group of extracts, this time in hand A, which seems very similar to material in the extant workdiaries but none of the content of which can be identified there, appears in BP 38, fol. 15, and BP 41, fol. 124 (these are matching items in the same hand and format, and it seems almost certain that they once belonged together, although they are now separated):

An ingenious Physitian that not so longe since made some <considerable> stay, att and about the cape of Good hope, and ventur'd<sup>51</sup> to goe a great way in to <the>

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51 Altered from 'ventured'



Countrey Answer'd me that from thence he had seen some <distant> mountains which were said to be some of the Mountains (call'd by the <Geographers><sup>52</sup>) of the Moon notwithstanding the smal latitude of that <Climate><sup>53</sup> and this being a part of Afric.

A very Ingenious Navigator being himselfe skill'd in diveing I enquired of him whither in those hot Climats he had saild thorow he found the sea<sup>54</sup> warmer att the bottom as the Aristotelians would have <it and> not rather colder att the bottom than the top. To which Question he Answer'd me, that he found the water near the surface warm because of the vigorous action of the Sun beams which reached a pretty way downwards but when he discended low<er> he found the water to grow colder and colder, and when I further enquired how far he<sup>55</sup> dived when he made this observation he told me twas about eight fathom or forty eight foot.

An Ingenious <Physitian> that travelled much in the southern Hemisphere, and <to><sup>56</sup> some parts of it, where our English are not permitted to come, confirm'd me <by his own Experience><sup>57</sup> the opinion, that beyond the (Æquinoctial) line the cold is usually far greater than tis wont to be in the same degree of northern latitude. And this he answered that he particularly observd not long since, dureing the stay he made att the Cape of Good hope and the excursions he <thence><sup>58</sup> made as far as the Empire of Monomotapa.

Secondly, there are fair copies on single sheets of paper, comparable to the extracts, evidently from workdiaries, that have already been noted as interspersing the texts of Boyle's mineralogical writings published for the first time in volume 13 of the *Works* (see above, p. 151; also comparable are the retranscribed extracts to be found in the section of the text of *Paralipomena* printed as the appendix to chapter 4, below). In some cases, the plausibility of these coming from workdiaries which are no longer extant is increased by the fact that they survive in immediate juxtaposition to comparable copied extracts which come from extant workdiaries. For instance, BP 18, fol. 61, is juxtaposed with a copy of Workdiary 36-89, while BP 37, fol. 119, is juxtaposed with a copy of Workdiary 36-76. In another case, BP 9, fol. 78, a further fair copy by Bacon, the fact that it has the marginal date 'July 27' again suggests its origin as part of the workdiaries corpus although it, too, is not extant there:

A Bolt-glass, which by our guess might hold about [10 ounces] of water, was fill'd up almost to the top of the neck with water of Mr. Walters Martial Spring, and then the Glass being with speed seal'd up Hermetically, was set aside in a quiet place, for six weeks or a little longer, to try whether it would so long retain its vertue of

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52 Replacing 'Antients' deleted.

53 Replacing 'planet were covered' deleted. The next word but one, 'this', is altered from 'there'.

54 Followed by 'bel' deleted.

55 Followed by 'ha' deleted.

56 Replacing 'a' deleted.

57 Replacing 'in' deleted.

58 Replacing 'once' deleted. Eight words later, 'Monomotapa' is altered from 'Monomopata'.

producing the due colour with Gauls. And having at the end of this Time broke off the seal'd Apex of the vessel, and pour'd out some of it into a Drinking glass, we found that a little newly made powder of Galls, being put into it, there was presently produc'd a fine and deep purple colour, not inferiour, that I could observe to that that had been afforded by a Portion of the same water, when six weeks before that time, it had been lately brought from the Martial Spring.

Then, there are various groups of such material which may have been together since Boyle's time, though they may reflect groupings created during the later reorganisation of the archive. Often, they comprise a mixture of material that may come from workdiaries with other types of material, such as recipes or sections of more discursive text, and hence more caution is required in evaluating their status. An example is provided by the group of material constituting BP 28, pp. 277–83. This starts with two sheets of paper, BP 28, pp. 277 and 279, the latter partly cut away, with retranscribed extracts on them, one of which also appears in BP 25, p. 309. The next leaf (p. 281), on the other hand, is a nineteenth-century page with various memoranda pasted onto it, while the next (p. 283) is a separate sheet with two further extracts on it, apparently derived from an otherwise lost letter from Lord Shannon dated 8 August 1688 (since it is not clear whether it was addressed to Boyle, it was not included in the *Correspondence*).

A similar case is provided by BP 26, fols. 78–89, which starts with a series of items copied – often with their original numbers – from Workdiaries 21 (entries 633–4, 641–4, 711–13) and 36 (entries 66–7). Thereafter, we have another extract from an extant workdiary on fol. 84 (27–14); two more on fol. 85 (19–28, 29); two more on fol. 86 (21–244, 245); and two more on fol. 88 (21–201, 213). However, other items appear to represent a mixture of different types of material, including sections of text and memoranda by Boyle, items evidently from Boyle's lost recipe collection (as is suggested by the marginal numbers with which they are endorsed), and a transcript of a mathematical equation provided for Boyle by John Wallis, together with a further related passage that may be from the same source; and a passage in French. However, there are also various copied extracts on single sheets or part sheets which seem likely to be from workdiaries which are not extant. Three of these may be quoted, pasted onto fols. 87, 88 and 89, the first and last endorsed 'E & O P' in pencil (the latter is also endorsed '72'), and the third 'Statical Experiment about [water]':

A small Lamp Viol being hermetically seal'd when the Air <was> well rarify'd within it, and afterwards suffer'd leisurely to cool; was, when it had lain a pretty while, broken to peices (by the weight & Irruption<sup>59</sup> of the External Air) with a very considerable noise, and that in the very Body and round part of the Bubble; but not in the neck, or near the place, where it had been seal'd up. [Fol. 87]

59 Altered from 'Eruption'.

May 22th 1664

A Glass Buble weigh'd in destill'd fair Water xxix Grains. In the same kind of Water (not destill'd) not quite 27 Grains and a half. [Fol. 88]

Aug 26

It happening to thunder much in the morning, there was taken a Pendulum that vibrates Seconds, by the help of which I measur'd the Intervals of Time betwixt the Lightnings striking my Eye, and the noise of the<sup>60</sup> Thunders first reaching my Ear. But I reckon'd by the returns of the Bullet towards the place, I first let it fall <from> and consequently by double vibrations. Of these, the first time I observ'd 10 that is, 20 single Diadrams; the next 8 & ½. the Third 8. the fourth 8. and almost a half, the fifth & last 12 and a half.

[The Instrument like Wire for counting Seconds with a Pendulum & wheels was imploy'd at the latter end of the Operation and afford us these Numbers (1st) xi (2<sup>d</sup>) viii ½ (3<sup>d</sup>) v (4<sup>th</sup>) xv ½.].<sup>61</sup> [Fol. 89]

A comparable group is provided by BP 38, fols. 95–6 (Plate 6), which has already been noted in that the material all relates to *The General History of Air*: it is perhaps significant that it is adjacent to a group of recopied extracts on fol. 94. Again, extracts from extant workdiaries are interspersed with related material, some of it sections of more discursive text, but some of it apparently stemming from lost workdiaries. In this case, the extracts – including those from extant workdiaries – are sometimes adapted or endorsed, evidently for insertion into the text for which they were destined. Perhaps the most interesting is a passage in hand E to which has been added an introduction in hand A as follows, which makes it clear that this is a further interview with Henry Stubbe, complementing those extant in Workdiary 22: 'A learned man that was Physitian to the Governour of Jamaica being att his return askd divers questions of me concerning that Island, gave me among others the following answer'. The whole passage is endorsed in hand C: 'To the Tract of the Aire And the notes about hardness' and 'ch: 8':

Lignum Vitæ <said he> & most other Trees in Jamaica when they are newly cut downe, whereever you cut the wood that part which is exposd to the Aire will quickly grow green tho that which is a litle beneath it be yellow <or> of any other colour, & this Lignum Vitæ when green is as soft as oake or softer, & many other Jamaican woods that are soft when newly cut downe, will afterwards so harden in the Aire that ordinary Toolles will make no Impression on them, & the nailes that peirc'd them easily before, can no more be forc'd out of them & this is cheifely conspicuous in the Cabbage tree which being a wood soft enough, when it is cut downe, the Pith which is very copious, will quickly rot of itselife, & the rest of the Tree serves for a Pipe of perhaps a <100> foot long, that will not corrupt under Ground but grow almost as hard as Iron.

60 Altered from 'your'.

61 The square brackets are Boyle's.

It is perhaps worth ending by noting here a further short item, also from Stubbe, among a group of items, most of them not from workdiaries, in BP 17. In this case the item in question is on fol. 41, where it is numbered '387' in pencil:

⟨The Governor of Jamaica's Physitian⟩<sup>62</sup> assur'd me that having prescrib'd for a Patient of his, sick of a Consumption, the Milk of Asses which they had ⟨there⟩ been fain<sup>63</sup> to feed with Callibashes; that food made the Milk so bitter, that she was not able to take it, unless it were sweeten'd.

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62 In Boyle's hand, replacing 'Dr S.' deleted; 'there' is also inserted Boyle.

63 Altered from 'faint'.



Calendar of Retranscribed Workdiary Entries and Related Material

<i>Location of retranscribed material in BP</i>	<i>Source in workdiaries (where appropriate)</i>	<i>Brief description</i>	<i>Hand</i>	<i>Notes</i>
BP 9, fol. 49	—	Fair copies of travellers' accounts of various phenomena	Bacon	Since all are introduced by 'we' or 'I', it is possible that these come from letters that are otherwise lost.
BP 9, fol. 78	—	Fair copy of experiment with sealed bolt-glass dated July 27	Bacon	Published in appendix 2; reference to Mr Walters not traced.
BP 10, fol. 6	—	Two recopied extracts on attraction of surfaces and particles, headed 'Memoirs for the Paralipomena'	B	Published on pp. 201–3, below.
BP 17, fol. 41	—	Note on prescription by the 'Governor of Jamaica's Physitian', numbered 387, but not extant in any surviving workdiary. Part of a group of fair copies of notes, recipes, etc. written on sheets of paper and/or pasted in.	Bacon, emended by Boyle	Published in appendix 2. Adjacent to fols. 43–4, published in L.M. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 302–4.
BP 17, fols. 114–15	36-25a	'Case of Palsy from a Fall'	Bacon	See <i>Exp. &amp; Obs. Physicae, Works</i> , vol. 11, pp. 398–400.
BP 18, fols. 11ff.	21-205 (fol. 18); —	Material intended for the second edition of <i>The Natural History of Human Blood</i> , including introductory material, chapter-headings, notes on experiments designed and executed, extracts and observations, etc.	Bacon, Greg, Smith (fol. 11)	Published in Hunter & Knight, <i>Human Blood</i> , pp. 1–18.
BP 18, fols. 60–1	36-89 (fol. 60); —	Fair copies on separate sheets of extracts concerning Mr Handyside's diving for treasure and Indian stupefying drink	Bacon	
BP 21, pp. 93, 95, 109, 111, 117, 133–5	—	Self-contained extracts, perhaps from lost workdiaries, forming part of the text of Boyle's <i>Of Subterranean Steams</i>	Bacon, C, A, Slare	Published in <i>Works</i> , vol. 13, pp. 403ff. See above, p. 151.

<i>Location of retranscribed material in BP</i>	<i>Source in workdiaries (where appropriate)</i>	<i>Brief description</i>	<i>Hand</i>	<i>Notes</i>
BP 25, pp. 113–25	—	Latin text of dated reports by Cony and Raddison, interspersed with preface to Part 2 of ‘Strange Reports’	M	Published in Hunter, <i>Scrupulosity and Science</i> , pp. 245–50.
BP 25, pp. 225–54	21-514, 563, 602, 631; —	‘Memoirs & Paralipomena the 2 <sup>d</sup> tome’: extracts, evidently from workdiaries that are no longer extant, interspersed with recopied versions of certain of these items, and of entries from Workdiary 21 (pp. 241, 243). The latter are endorsed ‘631, 563’.	Bacon, Greg, Slare, Smith, ?, Boyle	Published as appendix to chapter 4, below. Also bound in is ‘Mr Wicks’ Description of his Weather Glasse’.
BP 25, pp. 309–14	—	This comprises (1) material on a menstruum (p. 309, a separate sheet, a fair copy of the second item in BP 28, p. 277) and (2) ‘A note touching the strange, and incredible vertue of some Herbes’, a group of copied reports on conversations, a herbal experiment involving creation of Philosopher’s Stone, dated as translated from French in 1627, and a recipe (pp. 311–14)	Bacon	
BP 25, pp. 401, 405	21-699; —	Notes on shining sea at La Rochelle and on experiment with bay salt among miscellaneous sections of text recopied on sheets of paper, some conjugates, some paste-downs	Bacon	Page 405 endorsed in pencil ‘118’.
BP 26, fol. 7	21-297, 298	Report on gold mines and other mines in Hungary and Transylvania	Bacon	
BP 26, fols. 33–43	Some overlap with Workdiary 27	‘Promiscuous Collections out of Parrac his fourth Tome’: numbered observations on chemical matters, and further chemical notes and memoranda.	Bacon	See Principe, <i>Aspiring Adept</i> , p. 144, and id. ‘The Alchemies of Robert Boyle and Isaac Newton’, in M.J. Osler (ed.), <i>Rethinking the Scientific Revolution</i> (Cambridge, 2000), pp. 201–20, on pp. 206–7.

<i>Location of retranscribed material in BP</i>	<i>Source in workdiaries (where appropriate)</i>	<i>Brief description</i>	<i>Hand</i>	<i>Notes</i>
BP 26, fols. 66–7	19-1, 2; —	Notes on experiments with adhering marbles and velocity of descending bodies, on two separate sheets	Bacon	
BP 26, fols. 78–89	19-28, 29 (fol. 85); 21-201, 213 (fol. 89), 244, 245 (fol. 86), 633, 634, 641 (fol. 78), 642, 643, 644 (fol. 79), 711, 712 (fol. 80), 713 (fol. 81); 27-14 (fol. 84); 36-66, 67 (fol. 82); —	Notes on observations, reports on conversations, memoranda, recipes, etc.; some numbered, one dated ‘May 22 1664’ (fol. 88). Fols. 78–81 comprise conjugate leaves; fols. 82 and 83 are separate sheets; fols. 84–9 comprise pasted-down fragments. The copies of entries in extant workdiaries noted in the previous column are interspersed with untraced material on fols. 83, 84, 86, 87, 88 (part) and 89 (part).	mainly Bacon	Material from fols. 87–9 published in appendix 2. Fol. 78 is endorsed ‘Transcribed out of my old outlandish notes’. On fol. 84 is a memorandum by Miles referring to 27–14. On fol. 85 is an extract from a letter from Wallis to Boyle, 20 May 1685: see <i>Correspondence</i> , vol. 6, pp. 121–2.
BP 26, fols. 105–6	19-39 (fol. 105); —	Barometric observations. Fair copies on separate sheets	Bacon	Fol. 106 printed in <i>1st Continuation, Works</i> , vol. 6, p. 87.
BP 26, fols. 115–16	—	Note on weight of diamond. Fol. 115 is a part sheet.	Bacon	See <i>Exp. &amp; Obs. Physicae, Works</i> , vol. 11, pp. 386–7.
BP 26, fol. 137	21-703	Report on preserving juices. Pasted slip, adjacent to part of Workdiary 30	Bacon	
BP 27, pp. 55, 57, 83, 159	21-337, 338, 339, 359, 361, 401, 402, 404, 708	Various entries from Workdiary 21 recopied on leaves bound into the workdiary itself	Bacon	Published as part of Workdiary 21.

<i>Location of retranscribed material in BP</i>	<i>Source in workdiaries (where appropriate)</i>	<i>Brief description</i>	<i>Hand</i>	<i>Notes</i>
BP 28, p. 87	—	Self-contained extract, perhaps from a lost workdiary, forming part of Boyle’s <i>Memoirs for the Natural History of Tin</i>	Bacon	Published in <i>Works</i> , vol. 14, pp. 141–2. See above, p. 151, note 41
BP 28, pp. 277–83	—	Miscellaneous reports, observations and recipes. 277–9 and 283 are separate sheets; 281–2 is a nineteenth-century leaf with extracts pasted to it.	Bacon, Greg	For overlap with BP 25, p. 309, see above. Includes report on p. 283 of astronomical phenomenon dated ‘Aug 8 1688’ from Lord Shannon, possibly from a letter.
BP 30, p. 411	—	Observations concerning germination of vegetables and beer in thundery weather <i>in vacuo Boyleiano</i> , dated 16 March, 17 June. The former similar to, but not identical with, entry 239 in Workdiary 29.	Bacon	The latter printed in <i>Works</i> , vol. 8, p. 230.
BP 35, fol. 204	—	Observation on gold found in rivers in Cochin China. Copy of part of BP 39, fols. 76–7	Bacon	
BP 37, fols. 118–19	36-76 (fol. 118); —	Note on vast extent of Blany family and account of soft wood found in a pit in the Netherlands, on two seperate sheets	Bacon	
BP 38, fol. 15	—	Reports on observations by voyagers. See also BP 41, fol. 124.	A	Published in appendix 2.
BP 38, fol. 94	21-613, 692, 706; —	Copies of travellers’ reports, interspersed with extract from Agricola, <i>De re metallica</i>	Slare	Introductory text added in first two entries, and slight alterations to last.
BP 38, fols. 95–6	21-536 (fol. 96v), 615 (fol. 95v); —	Material concerning the air and its composition and characteristics, including notes by travellers on this and other subjects, mainly intended for <i>General History of Air</i> .	P, E, G, A, C	One passage published in appendix 2. The recopied entries from extant workdiaries sometimes have additional introductory text. See plate 6



<i>Location of retranscribed material in BP</i>	<i>Source in workdiaries (where appropriate)</i>	<i>Brief description</i>	<i>Hand</i>	<i>Notes</i>
The fair copies of entries from Workdiary 21 are interspersed with other sections of text, at least some evidently from lost workdiaries.				
BP 39, fols. 76–7	—	Information about Siam from ‘A Secular Preist instructed in the Cartesian Philosophy by Mr Rohaut’	C, Greg	A self-contained text, perhaps to be compared to BP 39, pp. 51–3. fols. 216–17, printed in Hunter, <i>The Occult Laboratory</i> , pp. 51–3.
BP 39, fol. 200	—	Note from President of English at Surat	Bacon	
BP 41, fol. 124	—	Report on observation by traveller. Format matches BP 38, fol. 15.	A	Published in appendix 2.
Bodleian Library, Oxford, MS Locke c. 37, fols. 76v–7v	—	Extract concerning tarantulas, adjacent to material used in <i>General History of Air</i>	Smith	See <i>Works</i> , vol. 12, p. xx.

## Chapter 4

# Robert Boyle's *Paralipomena* An Analysis and Reconstruction

Michael Hunter, Harriet Knight and Charles Littleton

### General

Among the Boyle Papers at the Royal Society are various documents relating to a work planned by Boyle with the title *Paralipomena*.<sup>1</sup> These comprise prefatory material, a whole series of overlapping versions of a table of contents, and what are apparently sections of the text of the work. Most of these items are in the hand of Robin Bacon, Boyle's most commonly used amanuensis in the last fifteen or twenty years of his life. Related drafts survive in the hands of Hugh Greg and Thomas Smith, who worked for Boyle over a similar period; others are in hand 'B', which can be dated c. 1680; while related material survives in notebooks dating from the last ten years of Boyle's life.<sup>2</sup> It seems fairly clear that it is to that epoch in his career that the project as we have it is to be assigned, though it has a prehistory in terms of Boyle's earlier attempts to organise his miscellaneous data. These throw some light on the *Paralipomena* project and it is appropriate to survey them here by way of background.

The title *Paralipomena* alludes to the idea of a supplement comprising things omitted from a work. In origin, it alludes to the books of Chronicles in the Old Testament, containing information omitted from the two books of Kings. In the seventeenth century, it seems to have become quite commonly used to describe a supplement or appendix to an existing work, for instance in Daniel Sennert's posthumously published *Paralipomena* (1642), a work with which Boyle was familiar.<sup>3</sup> Similarly, Henry Oldenburg used the word in a letter to Boyle of 1 October 1667 to describe the relationship between the work by

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1 For virtually the only discussion of *Paralipomena* hitherto, see the brief account in Rose-Mary Sargent, *The Diffident Naturalist: Robert Boyle and the Philosophy of Experiment* (Chicago, 1995), pp. 138ff, esp. pp. 140–2, including a transcription of the contents list from BP 25, p. 222.

2 See below; for the dating of these handwritings, see above, pp. 47–9, 52–3.

3 See, for instance, *Works*, vol. 3, pp. 342–4 (where Boyle actually cites this work, though the citation in the MS version of the text in question suggests that he was slightly confused about his source). For a discussion of Boyle's references to Sennert in his writings, see William Newman, 'The Alchemical Sources of Boyle's Corpuscular Philosophy', *Annals of Science*, 53 (1996), 567–85.

Joseph Glanvill that materialised as *Plus Ultra* (1668) and Thomas Sprat's *History of the Royal Society* (1667), describing Glanvill's book as

some Paralipomena, relating to the History of our Society; wherein he means to take more notice of the performances of some Eminent members thereof, than hath been done by M. Sprat, and farther to recommend and vindicate the modern Experimentall Philosophers, by representing the advantages of this way of Tryals, both for Light and Use, above that of former times.<sup>4</sup>

In Boyle's case, the term was sometimes used as a description for a supplement or appendix: thus in the preface to his 'The Excellency of the Mechanical Hypothesis', published in 1674, the publisher explained how this work had been intended 'as a kind of *Paralipomena* to his Dialogue [about] *the Requisites of a good Hypothesis*', though in the end it was appended to *The Excellency of Theology* instead.<sup>5</sup> Earlier still, in his *Experimental History of Cold* (1665), Boyle employed the concept in connection with the last of the 'titles' that are used to organise that work, Title XXI, comprising 'Promiscuous Experiments and Observations concerning Cold'. Here the additional materials were twice described as '*Paralipomena*, which if they had seasonably come to my hands, or into my mind, might have had a more proper place among the foregoing Sections, or have composed a Title by themselves'.<sup>6</sup> This usage in the sense of a supplement to a specific work by Boyle sometimes recurs thereafter, in reference to his *Mineral Waters*, for instance, or his *Medicina Hydrostatica* or his *Natural History of Tin*.<sup>7</sup>

Increasingly, however, Boyle came to use *Paralipomena* as a title for a general repository of data that he had accumulated, and continued to accumulate, to supplement the numerous treatises that he had written and published from the 1660s onwards. The first reference to *Paralipomena* as an overall collection of material of this kind occurs in a letter to Henry Oldenburg dated 13 June 1666 about the desiderata of a 'Natural History in generall'. After giving a comprehensive view of the topics and themes that would be covered by such a history, Boyle postulated an appendix

consisting partly of *Paralipomena* or circumstances or other particulars forgotten to be set down in their proper places in the Body of the History; and partly of additional Experiments, Observations &c. that may have been newly discover'd, or may have otherwise occur'd, since the writing of the particular parts of the History to which they are now refer'd or annex'd.<sup>8</sup>

4 *Correspondence*, vol. 3, pp. 344–5.

5 *Works*, vol. 8, p. 101. For background, see *ibid.*, pp. xi–xii, and *Works*, vol. 13, pp. xlvi–xlvii.

6 *Works*, vol. 4, pp. 419, 428.

7 Cf., e.g., *Works*, vol. 10, pp. 12, 16, 78, 210, 224, 293; vol. 11, p. 280; vol. 14, p. 141.

8 *Correspondence*, vol. 3, p. 172. It is perhaps also worth noting the miscellaneous categories of data appearing at the end of Boyle's main list of headings for natural history, *ibid.*, pp. 174–5, which has resonances with some of the groupings that appear below. Note that, although the

Here, as will be seen, the concept is used partly for material that had been overlooked at the time of composition, and partly for material that came to light subsequently. In a further letter 'To the worthy Secretary of the Royal Society', which is unfortunately not dated but which seems likely to be addressed to Oldenburg and to date from a few years before his death in 1677, Boyle is more explicit, stating that the 'Particulars' that he was supplying, evidently for *Philosophical Transactions*, 'must be taken out of a Bundle of loos Papers, which I had laid together, as they came to hand with a prospect that they might serve as a *Paralipomena* or Supplements to the Entire Tracts, whether already publish'd or not, to which they seem'd respectively to be referable'.<sup>9</sup> These descriptions encapsulate the rationale of the compilation entitled *Paralipomena* that the various prefaces and contents lists discussed here were evidently intended to accompany, in the sense of a compilation which brought together material supplementing a range of works by Boyle, both published and unpublished.

This undated letter also encapsulates other aspects of the rationale of the later work, not least in its elaborate metaphor concerning the value of incomplete materials of the kind that the compilation comprised. As Boyle put it, his scruples about the unworthiness of these fragmentary materials to their context

are somewhat lessen'd, when I remember, that Men are serv'd and accommodated, not only by those Husbandmen, that once a year bring in whole wain-loads of Corn & Hogsheads of Wine, but also by Gardiners that do not wait for Autumn nor bring in at some such great & mature Productions of their labour as Harvest and Vintage afford, but content themselves to be ever & anon furnishing the Markets with Baskets of Roots & Herbs and Flowers and Grapes, and other fruit, and by the frequency & variety of these Supplis make amends for the small Bulk of what they bring at a time.

In an ancillary letter which may be of similar date, Boyle added other elements of the rationale of the later book, including the fact that the data were set down randomly, in the order in which they had occurred to him, with 'Marginall Notes' being added to indicate to which of his treatises they related.<sup>10</sup> This is echoed in a further, hitherto unpublished document, evidently intended as a preface to a similar collection of such material. It may be quoted at length here, as providing further information on *Paralipomena* itself as well as a hint of Boyle's intentions for the data in it.<sup>11</sup>

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text of this letter is printed in *Correspondence* (as in *Oldenburg*) in the order in which it appears in the MS, it seems likely that its component pages are misbound, and that it should in fact be presented in the order 1–7, 15–17, 13 and 9–11, so that the 'Appendix' comes last.

9 *Correspondence*, vol. 6, p. 357.

10 *Correspondence*, vol. 6, pp. 357–8, 359–60.

11 Quoted from BP 9, fol. 47, where it is juxtaposed with the version of the 'Preface' to *Paralipomena* dealt with below. There is also a quite heavily corrected draft version in the



'Tis likely Sir that by those I am a Stranger to, any such Papers as these that I now send you, will be look'd upon as Effects of Vanity; as if I thought my former Writings were worthy of a Comment. But I have the happines to be too well known to You, to fear that you will put such a Construction on the Effect of my Obedience. And indeed the Particulars you now receive, were far less intended for a Comment, than a Supplement: which when an Author himself makes, 'tis rather a tacit acknowledgment that he judges what he writt, Imperfect, than a Proof that he overvalues it. I have in another Paper given an account of the Inducements, that prevail'd with me to lay up several Observations & Experiments, by way of *Paralipomena* and *Appendices* to some of my other writings. But at present 'twill be needfull and pertinent only to take notice, that the Reason why I consent to the publication of these trifles, is not only to comply with the forwardnes you are pleas'd to shew, of having them appear in so good company as you admit them to; but because the Collection of my *Paralipomena* being not like to be finish'd, much less to be publish'd, in haste, I was willing that some Experiments that were not so necessary to it, may not so long lye conceal'd, whilst you think they may in the mean time, either Gratify, or afford some not useles Information to, the Cultivators of Experimental Philosophy. Many of them, 'tis hop'd, will be found indulgent to writings, that would come abroad with fewer disadvantages, if the Author did not rather chuse to trust Their good nature, then delay to manifest his Forwardnes to serve them. And these Intimations I desire may serve for a *General* (thô not a *full*) Preface, to those Shreds of Paper, for which I may now and then endeavour to procure room in your curious *Transactions*.

### **Boyle's Workdiaries, 'The Order of My Severall Treatises' and his Early Attempts to Organise his Miscellaneous Data**

To place *Paralipomena* in context, it is necessary to recall Boyle's almost compulsive accumulation of data throughout his life, a symptom of the Baconian impulse by which he was so deeply influenced. This is seen in such treatises of the 1650s as his *Usefulness of Natural Philosophy*, especially Part II (of which the first part was published in 1663 and the rest in 1671), which overflows with profuse information on a variety of topics and from a variety of sources. Thereafter, the systematic experimentation in which Boyle engaged, as reflected in the published works from the 1660s on which his reputation was largely based, added to the quantity of data that he had to deal with. One of the most important repositories of such data was Boyle's ongoing series of workdiaries, which has now been published in full, and an overview of which was given in chapter 3. As we saw there, these collections of notes on

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hand of Smith in BP 38, fol. 34 (the only significant difference in which is a deleted attempt to rewrite the third sentence as: '& wil believe that without that I may rather intend these trifles for a suppliment of imperfect writings then comment', which is superseded by the BP 9 text). A further version in the hand of Smith survives in BP 36, fol. 14 (Plate 13), with the sentence 'Many of them ... to serve them' in the margin, keyed to a text which lacked it.

experiments and observations, information vouchsafed him by others and extracts from books were written down sequentially as Boyle came across the data. Their individual entries were often subsequently numbered and sometimes endorsed with the topic that they dealt with, but it was in the nature of these compilations to comprise data that belonged together in terms of the chronology of when it was collected, rather than the themes to which it related. Virtually the only structure that they had was that Boyle seems to have thought of them in terms of 'centuries' (an evident allusion to the organisation of miscellaneous experiments in this form in Francis Bacon's late collection of natural historical material, *Sylva sylvarum*), and thus seems to have presumed that it was appropriate to start a new series after he had reached 100.

As his career progressed and he acquired ever more sets of notes of this kind, Boyle clearly came increasingly to feel that some means was needed of organising this miscellaneous data and, if appropriate, of redistributing it into more thematic categories. As we will see, this could be achieved either by annotating the material *in situ*, or by physically redistributing it, or by the former step forming a prelude to the latter. It is at least partly in this context that one should see a document that Boyle compiled in the mid 1660s entitled 'The Order of My Severall Treatises' (Plate 4), of which various overlapping recensions survive.<sup>12</sup> 'The Order' encapsulates the programme of writing and publishing on which Boyle had by now embarked, and in part it may simply have acted as an aide-memoire concerning his published and unpublished works. But, in addition, it was almost certainly intended as a basis for classifying the miscellaneous sets of notes that Boyle had acquired, with the list of titles of published and planned works acting as headings under which further data could be distributed. 'The Order' begins by listing published works in order of publication, moves on to those which are unpublished but which represent identifiable individual units, and concludes with various miscellaneous categories. The first item in the list, 'The Engine Booke', is *Spring of the Air*, published in 1660. Item 2, *Certain Physiological Essays*, was published in 1661, as was item 3, *The Sceptical Chymist*. The fourth item, the defence against Hobbes and Linus, was published with the second edition of *Spring of the Air* in 1662. Item 5, the first 'tome' of *Usefulness*, was published in 1663; item 6, *Colours*, followed in 1664 and *Cold* (item 7) in 1665. The order of the following four items is not that of their publication, implying that they were all forthcoming at the time of listing, which must therefore be pre-1666. Item 8 refers to the second tome of *Usefulness* (published in 1671) and here explicitly noted as 'unpublishd'. Item 9, the 'Appendix to the Engine Booke', was published as *Spring of the Air: First Continuation* (1669), and items 10 and 11, *Hydrostatical Paradoxes* and *The Origin of Forms and Qualities*, were both published in 1666.

12 See *Works*, vol. 14, pp. xl–xli and 331–2.

The remaining works are ones that Boyle continued to work on, some of which he published either wholly or in part in his later years (such as item 12, 'The History of Qualitys');<sup>13</sup> some of which survive in fragmentary form and have been published in recent years (such as item 13, 'Spontaneous Generations', item 18, 'Occult Qualitys', and item 19, 'Origine of Mineralls');<sup>14</sup> and some of which are more obscure, including 14 'Of the compiling a Naturall History', 15 'Of Improbable Truths' and 16 'The Scepticall Naturalist'.<sup>15</sup> There are then various, more miscellaneous categories. One, 'Miscellanea Physica or Essays', is evidently elucidated by the ancillary list of 'Essays &c' which accompanies one copy of 'The Order', and which contains a further group of titles of writings by Boyle; a further item, 'Topica particularia on severall subjects', was evidently a repository for the various Baconian-inspired sets of 'heads' for organising data that Boyle had started to compile in the 1660s.<sup>16</sup> In addition, there is a heading for 'promiscuous Experiments & Observations in the forme of a Sylva', and then 'Communicated Observations Physiologicall & Medicall' and 'Varia Lectiones Physicae', the latter two evidently attempting to differentiate material given to Boyle by others and notes from books.<sup>17</sup>

These headings are numbered from 1 to 24; additionally, each entry is allocated a letter (from A to Z in alphabetical order, with I/J and U/V each treated as a single letter). These are listed, with the numbers, to the left-hand side of the entries. To the right of the entries in two out of the six extant copies of 'The Order' is a further series of numbers, from 1 to 34: certain titles have several numbers (in ascending order) allocated to them, though no numbers are assigned to the four last miscellaneous categories. The implication is that these represent a code for sorting the data that Boyle had by then collected and was continuing to collect, so that it could be juxtaposed with the treatise to which it was relevant. That this is the case is suggested by the evidence of a link between 'The Order' and the workdiaries noted in the previous chapter.<sup>18</sup>

In this connection, it is worth dealing with two documents already noted in appendix 1 to chapter 3. One is BP 27, pp. 164–5, 'An Index belonging to the

13 The reference may be to 'An Introduction to the History of Particular Qualities', published in *Cosmical Qualities, Works*, vol. 6, pp. 265–84.

14 See M.B. Hall, 'Boyle's Method of Work', *NRRS*, 41 (1987), 111–43; *Works*, vol. 13, pp. 273ff., 363ff.

15 Of these, the first may describe Boyle's letter to Oldenburg of 13 June 1666, referred to above; both this and the second recur in later lists of Boyle's writings: see *Works*, vol. 14, pp. 344, 351. 'The Sceptical Naturalist' was to have incorporated 'The Discernment of Suppositions': see BP 9, fol. 14.

16 *Works*, vol. 14, p. 332; for the lists of 'Titles' compiled by Boyle that are evidently referred to here, see Hunter, *Heads & Inquiries*.

17 It is perhaps worth noting that there is some variation in the way in which miscellaneous material was treated in the two earliest examples of 'The Order'.

18 See above, pp. 151–2.



flower pot booke', which could refer to the workdiary that precedes it except that that has a vellum cover entitled 'The Outlandish Booke'. Either way, a link with 'The Order of My Severall Treatises' and the lists of numbers associated with it is suggested by the fact that 'An Index' lists the letters A to U and the numbers 1 to 32, in other words in both cases just two short of the total number of letters and numbers that accompany 'The Order'. Possibly, the idea was to allocate entries to these headings: however, since no entries have been made under any, it is not possible to speculate further on what their significance might have been.

More revealing is BP 10, fols. 113–14, a list of titles with numerals attached. Its connection with 'The Order' is suggested by its use of similar titles for Boyle's works (for example both call *Spring of the Air* 'The Engine Booke'). The entries are also listed in a broadly similar order, although 'Hydrostaticall paradoxes' and 'The Origine of Formes' (both published in 1666) here precede the 'Unpublished Usefulness of &c' and 'Appendix to the Engine &c'. This alteration suggests that this list postdates 'The Order' and has been altered to accommodate the 1666 publications; a terminus ante quem of 1669 is suggested by the fact that the 'Appendix to the Engine &c', published in that year as *Spring of the Air: First Continuation*, here follows the second *Usefulness*, which was not published until 1671. Within the unpublished material, the 'History of Qualitys' has moved down the list, now following 'Spontaneous Generations', 'Improbable Truths', 'sensation in generall', 'History of stones & mineralls' and a new category 'History of [Fla]me & [He]at'.<sup>19</sup> The new list also includes a new 'History of water'; it omits 'Of the compiling a Naturall History', 'The Scepticall Naturalist', 'Occult Qualitys' and the various miscellaneous categories that make up the last five items in 'The Order'. Under these titles are sets of numerals (for example 'Spontaneous Generation' has '85, 98, 123', while 'stones & mineralls' has '14, 21, 28, 31, 44, 47, 52, 84, 89, 101, 118, 124, 127'). These numbers presumably refer to entries in some continuously numbered sequence of at least 137 entries (137 is the highest number that appears), which have been distributed to the titles of the works to which they were deemed relevant. Entries are usually referred to one title, but sometimes to more than one, presumably because the information in question was seen as relevant in more than one connection: 14, for instance, appears under 'stones & mineralls' and also under both the printed and unprinted *Usefulness*. A few numbers (for example 7, 9) fail to appear at all, presumably because the data they comprised did not seem relevant to any treatise. Possibly, the 137 entries in question constituted a workdiary, but it has not proved possible to link the numbers in question with those in any extant example.

A further witness to an attempt at sorting miscellaneous data that is apparently of comparable date is a document, BP 10, fol. 138, which is in an

19 Hypothetical reading due to damage to MS.



unfamiliar hand, though it bears some similarity to the hand in which one of the copies of ‘The Order’ is written (BP 22, p. 60). Its relatively early date is suggested by the fact that it is addressed to ‘Pyrophilus’, like treatises written by Boyle in the 1650s and early 1660s. This is entitled ‘Advertisements’, and its text is as follows (the verso is blank):

The Title being sufficient to declare the nature of this MS. I shall not need, Pyroph. to give in this place any more then these 3.<sup>20</sup> or 4. advertisements about it.

1. There are 2. differing wayes of handling the Subjects treated of in this *Chaos*; for<sup>21</sup> some I do not take any solemn notice of, but mention them succinctly, as the *L. Verulam* writes of those things which Hee calls Experiments Solitary, or which if they be Experiments in Consort, consist but of few particulars; and the Subjects that I thus treat of are to be met with at this end of the book, but there are other subjects which I intended more fully to consider and insist on, such as are Fermentation, Putrefaction water, air, flame &c. and as to these, because they will each of them take up much room, and yet I know not how much, I thought it convenient for distinction sake to place them by themselves at the other end of the book, where there will be more room for so many particulars, which are there set down in order to the Naturall Historys of those subjects; to fit them for which purpose, the particulars that are here huddled together in the casuall order wherein they occurr to me, are to be rang’d according to the Intimations of the *Topica particularis* or Articles of Enquiry about each of these Historys, which Topicks are likewise placed at the other end of the Book.

Unfortunately, we do not know what the title was that Boyle thought would be self-evident; it might have been *Paralipomena*, or, ‘Sylva’, as in item 20 of ‘The Order’, or even ‘Chaos’, alluding to what was described in an inventory of Boyle’s papers compiled by Henry Oldenburg on 26 March 1677 as ‘a Chaos of Experiments of my owne, consisting of nine Centuries. In three or four several paper books’, probably an allusion to the workdiaries.<sup>22</sup> Either way, it was clearly a collection of miscellaneous experiments, for which Boyle favoured Bacon’s terminology of ‘Experiments Solitary’. One interesting feature of the text is Boyle’s apprehensiveness as to how much space the gathered data would take up, an issue that will recur later in this chapter, since the pursuit of flexibility which is already in evidence here was to lead him to increasingly convoluted solutions. What is equally interesting is that, although making allowance for individual experiments, Boyle sought to arrange this material in terms of subject, and, within this, of ‘Topica Particularia’ relating to each theme – in other words by reference to the Baconian-inspired lists of ‘heads’ or ‘titles’ that he had by this time started to compile, which often dealt with specific topics (luminosity, for instance, or copper), though some were more general in nature.

20 Altered from ‘2’. The next word but one, ‘4’, is altered from ‘3’.

21 Followed by ‘of’ deleted.

22 *Works*, vol. 14, p. 338; for further references to this ‘Chaos’, see Hunter, *Scrupulosity and Science*, p. 130.

Indeed, it may not be insignificant that it refers to these as being 'at the other End of the Book', rather as they appeared at the end of 'The Order'. The implication is perhaps that there was also a list of the main subjects under which data was being preserved which is no longer extant (conceivably a copy of 'The Order'), since it is perhaps worth noting the implication of the document that many crucial facets of nature were to be covered (an echo of Boyle's 1666 letter to Oldenburg). On the other hand, it should also be pointed out that, since only one numbered point appears whereas Boyle promised three or four, the document is almost certainly incomplete.

### Boyle's Later Attempts at Data Organisation

That Boyle did, indeed, use his lists of 'heads' to sort data is suggested by various further examples. The first concerns Workdiary 21, compiled in the late 1660s and very early 1670s, in which, as Harriet Knight has discovered, many entries have been given numerical codes that can be linked to perhaps the most famous of all Boyle's lists of 'Titles', his 'General Heads for the *Natural History of a Country*, Great or small', published in *Philosophical Transactions* in 1666.<sup>23</sup> The intention was presumably that they would be recopied and sorted according to these categories, though there is no evidence as to whether this took place. A further instance concerns the appendix added to the second edition of *Cold* in 1683. Here, the new material was apportioned to the 'Titles' under which data had been organised in the original book. The publisher explained to the reader in his preface how, during the period that had intervened since the work was first published, Boyle 'threw aside the Particulars he intended to add among other loose Papers', whereas now he was suddenly expected to 'put this *Chaos* of loose *Memoirs* into some order'. With the help of 'a learned Friend', Boyle (who was then indisposed) managed 'to refer the Particulars, as near as might be, to the respective Titles they seem'd most to belong to'.<sup>24</sup> An analogy is provided by a similar group of material intended for an appendix to a planned second edition of *Human Blood* that never materialised (which means that the data in question remains in manuscript among the Boyle Papers): here, the structure of 'titles' provided a mode of sorting which is evident in endorsements to the recopied nuggets of data prepared with this end in view.<sup>25</sup> It is perhaps also worth mentioning

23 Harriet Knight, 'Organising Natural Knowledge in the Seventeenth Century: The Works of Robert Boyle' (Ph.D. thesis, University of London, 2003), pp. 110–13. For the 'General Heads', see *Works*, vol. 5, pp. 508–11.

24 *Works*, vol. 4, pp. 545–6 and 543ff., passim.

25 BP 18, fols. 11ff, now published in Hunter & Knight, *Human Blood*. See also Harriet Knight and Michael Hunter, 'Robert Boyle's *Memoirs for The Natural History of Human Blood* (1684): Print, Manuscript and the Impact of Baconianism in Seventeenth-Century Medical Science', *Medical History* (in press).

various keys to alphabetical codes to designate material on different topics – though usually of a very general nature, for instance ‘Theological’, ‘Chymical’ – which survive, particularly in the notebooks that Boyle used in his later years.<sup>26</sup>

Moving closer to *Paralipomena* itself, it is appropriate here to discuss Boyle’s last published work, his *Experimenta et Observationes Physicae*, itself a very miscellaneous collection of data roughly sorted by topic to which Boyle evidently saw *Paralipomena* as being closely linked. Indeed, as we shall see, *Paralipomena* is often described as an appendix to *Experimenta et Observationes Physicae*.<sup>27</sup> In its preliminary comments, this is perhaps the most Baconian of Boyle’s works, not least in the series of ‘Advertisements’ that precede it, which invoke Bacon at every turn as providing a precedent for the book’s combination of single experiments and ‘Experiments in Consort’; its ‘scholia’ or observations on the recorded experimental data; its inclusion of second-hand reports on topics of which Boyle had no direct personal experience; and so on. The text comprises groups of data that he claims he did not have time to write up in a more systematic form, taken from his ‘Memorials, and other scattered Papers’, and allocated to ‘Certain Heads or Titles which I called Chapters’. These ‘Chapters’ present groups of experiments and observations on the magnet, on diamonds, on colour changes, on chemistry and on medical matters. Other chapters are more miscellaneous, comprising ‘Experiments and observations Solitary’ (here are ordered to some extent by being grouped in ‘Pentads’ or groups of five). At the end is a section comprising ‘Strange Reports’.<sup>28</sup> It is apparent both from Boyle’s prefatory comments and from ancillary manuscripts that the volume as published was intended only as a part of the whole, and the putative content of the remainder of the book, and the rationale underlying it, are revealed by extant manuscript material. Perhaps the most interesting such item is BP 36, fol. 19, which opens with the title ‘A Scheme or Method of the Experimenta & Observationes Physicae’ and the note:

This Treatise is divided into severall Parts, or distinct Tomes because they are not intended to be publisht all at once.

But the number of Chapters goes on in an uninterrupted Order, the Number, for instance, of the first Chapter of the Second Tome, following next after that, which belong to the last Chapter of the First Tome; but as for these Papers that are called Titles, they ought not to have any ordinal ~~number~~ prefixt to any of them.

26 Discussed in Knight, ‘Organising Natural Knowledge’, pp. 99ff. See esp. MS 186, fols. 1v, 2v, 3v, 189; MS 189, fols. 47, 67v; MS 194, fols. 1v, 25v. For another example see BP 14, fol. 310. For related mnemonics, see MS 186, fol. 16; MS 189, fols. 113v–14.

27 See below, pp. 190, 197.

28 See *Works*, vol. 11, pp. liiiff., 367ff.



The document then goes on to list the content of the first volume, though the listing differs both in terms of what was to be included, and the order in which it appears, from the version actually published.<sup>29</sup> Moreover, the various listings of the content of the book among Boyle's manuscripts shows a striking variation as to what was to appear and in what order. What is apparently the earliest recension implies that the work would have included notes on experiments which in fact appeared in *Human Blood* (1684), along with the text on 'Vitiated Sight' that was published as an appendix to *Final Causes* (1688).<sup>30</sup> Later versions of the contents list show that, after initially being expected to run to two volumes, this was subsequently increased to three. They also differ as to what components would have been in which volume, and as to what would appear in the work at all. Among the topics to be covered were additional material relating to *Cold*; material on such themes as poisons, salt, water, *aurum fulminans*, the motion and preservation of bodies in a vacuum, and statical and hydrostatical phenomena; additional material on topics that had figured in volume 1, such as magnetic, chemical and medical phenomena, and the second, 'supernatural', part of 'Strange Reports'; and a variety of more miscellaneous groupings, including 'communicated observations', both medical and general, and the intriguingly titled: 'Physica Peregrinare, or the travelling Naturalist, containing Answers given to Severall Questions propounded by the Author to Navigators & other Travellers in remote Countreys'.<sup>31</sup> Throughout, there is the oscillation between the miscellaneous and the thematic which is also seen in the printed book, and in *Paralipomena*.

It is also worth noting that *Experimenta et Observationes Physicae* may have served the same function as *Paralipomena* in acting as a repository of more or less miscellaneous material deriving from Boyle's workdiaries. This is indicated by two of the indexes to workdiaries noted in appendix 1 to chapter 3, namely BP 27, pp. 197–209, and BP 35, fols. 127–8, in both of which the titles inserted in pencil or ink beside numbers often take the form 'E & O P' or 'P E & O', the latter presumably to denote an English version of the title.<sup>32</sup> Since it seems

29 BP 36, fol. 19. See also MS 187, fols. 107–8.

30 BP 36, fol. 95. For the relationship of this list to *Human Blood*, see Knight and Hunter, 'Boyle's *Memoirs for the Natural History of Human Blood*'. On the evolution of 'Vitiated Sight', see the 'Advertisement' to the published version in *Works*, vol. 11, p. 155. This list uniquely contains 'The presum'd sensation of absent objects'; other changes are mainly organisational.

31 Quoted from BP 36, fol. 84 (a fair copy of the versions in MS 186, fols. 26v–8 and 122). The following contents lists exist (in addition to the early one noted in n. 30): BP 35, fol. 184; BP 36, fols. 19, 58, 84, 96; MS 186, fols. 26v–8, 122, 175, 177v; MS 187, fols. 107v–8; MS 189, fols. 65v–6. See also the references to the work in the inventories in *Works*, vol. 14, pp. 348–9, 351, 353. It seems likely that the listing in MS 186, fols. 26v–8 (which has the most extensive range of material itemised as in part 3), postdates all the other lists, with BP 36, fol. 84, as the penultimate version.

32 See above, pp. 165–6.



likely that the bulk of the entries in question relate to a part of Workdiary 29 that does not survive, more than this cannot be said here: but it seems likely that *Experimenta et Observationes Physicae* (or the section of *Paralipomena* that was devoted to additions to this work: see below) was perceived by Boyle as an appropriate destination for at least some of his miscellaneous material, though its function may increasingly have been subsumed in this regard by the work that we are mainly dealing with here.

### ***Paralipomena*: The Index of Chapters**

We now turn to *Paralipomena* itself. There are four main categories of material relating to it: lists of the headings under which material is to be distributed; advertisements about the use of these lists; a preface to the work, and material evidently comprising parts of the contents. These will be dealt with in turn, their development being traced in each case through the multiple copies in the Boyle Papers.

The lists of chapter headings are probably the earliest manuscripts that relate directly to the *Paralipomena*. These exist in many copies, through which a clear evolution can be traced: the number of headings increases (the two earliest copies have twenty heads, ten copies have twenty-two, and a single copy has twenty-three) and these are given both numerical and alphabetical references in later versions. The earliest versions (BP 36, fols. 63, 92) appear to be in an early version of Bacon's hand. Both of these lists have only twenty entries; neither has any title or introduction. It is clear that they should be regarded as preliminary not only on account of their brevity, but also in terms of the order in which the items appear. In the version on fol. 92, the headings are not numbered, although space has been left for numbers to be inserted. In the copy on fol. 63, roman numerals have been inserted into these blanks, in pencil on the first thirteen entries, which are on the recto, and in ink with traces of alterations from earlier pencil in the remaining seven entries on the verso. These numbers do not follow the sequence of the entries as they appear in this list; rather the items are numbered 3, 4, 2, 1, 5, 6, 7, 9, 8, 10, 12, 11, 13, 14, 16, 17, 15, 18, 19, 20. This keys the entries to the completely different order they will assume in the fuller lists. In other words, this list begins with gems, third in the later version, then moves to colours, fourth in the revised arrangement, and so on. This version lacks the final two headings in the later recensions, both of which deal with medical matters, and especially with medical practice. It is possible that the early version precedes Boyle's abandonment of a separate work on medical practice, after which he required a home for miscellaneous material on such topics.<sup>33</sup> Since this list differs only

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33 See Hunter, *Scrupulosity and Science*, ch. 8.

in order and extent from the revised version, and was clearly intended to be superseded, it has not been transcribed in full here.<sup>34</sup>

Far more copies – ten in total – survive of the revised version of the list already mentioned, with its twenty-two chapters (BP 35, fols. 171, 190, 191, 213v; BP 36, fols. 4, 5, 36, 56, 112, 113, all in Bacon's hand: see Plate 12). There are some differences between these versions: BP 36, fols. 56 and 112, are untitled, while in two others (BP 35, fol. 171, and BP 36, fol. 113) the title is given as 'The Index to the Paralypomena'. These four also lack the letters that accompany the chapter headings in the fullest versions and the additional title, 'Materials for the Paralipomena', which appears in BP 35, fol. 213v, and BP 36, fol. 5. In these versions, the main title, 'An Index of the Chapters of the Paralipomena', takes the form of a marginal note. This transcription is taken from BP 36, fol. 5:

#### An Index of the Chapters of the Paralipomena

##### Materials For the Paralipomena

##### Chap 1st contains

- 1st. A. Particulars for the most part referable to the Discernment of Suppositions.
- 2d. B. Particulars belonging chiefly to the Essay of improbable Truths.
- 3d. C. Particulars for the most part referable to the Origine of Gems.
- 4th. D. Particulars referable chiefly to the Changes of Colours.
- 5th. E. Particulars belonging chiefly to the Memoirs of the History of Tin.
- 6th. F. Particulars belonging to the Letter about the Tryal of Ores.
- 7th. G. Particulars referable chiefly to the Origine of Minerals.
- 8th. H. Particulars many of them referable to the Dialogue of the Melioration and Transmutation of Metalls.
- 9th. I Particulars that may be referable chiefly to the Production of Inflammability.
- 10th. K. Particulars most of them referable to the *Examen* and Improvement of *Materia Medica*.
- 11th. L. Particulars referable to the Danger of too soon forsakeing Experiments upon probable reasons.
- 12th. M. Particulars referable to the Treatise of various Observations about the Air.
- 13th. N. Particulars containing some loose Memoirs belonging to the History of Flame.
- 14th. O. Particulars belonging to the Essay of strange Narratives.
- 15th. P. Particulars belonging to the Surfaces of Contiguous Fluids.
- 16th. Q. Particulars belonging to the Essay about the Porosity of Body's.

34 The arrangement of the shorter list can be reconstructed from the list of numbers given above. It is perhaps worth noting that, within ch. 20, 'Particulars belonging to the mutuall usefulness of speculative & practicall Physiology', 'of' is in fact written 'and', but corrected in fol. 63, and this poor copying also occurs in ch. 16, altered from 'portsative' to 'porosity of' in fol. 63, and ch. 17, where 'Essay' has been added and 'pose' corrected to 'pores': they must therefore be scribal copies of a lost original.

- 17th. R. Particulars belonging to the Essay of the Pores, and Figures of Corpuscles.
- 18th. S. Particulars belonging to the Tracts of Effluvioms.
- 19th. T. Particulars belonging to the various Effects of Fire as differinglly apply'd.
- 20th. U. Particulars belonging to the Mutual Usefulnes of Speculative and Practical Physiology.
- 21th. W. Particulars belonging to the Essays about the Physiological, Pathological and Dietetical parts of Physick.
- 22th. X. Particulars belonging to the Therapeutical part of Physick.

A single version exists (BP 25, p. 222) which additionally contains '23. Y. Experimenta et Observationes Physicæ'. This entry is slightly puzzling. As we will see, in various of the prefatory statements to which we will come shortly, *Paralipomena* is described as an appendix to *Experimenta et Observationes Physicae*. On the other hand, once the initial part of *Experimenta et Observationes Physicae* was published in 1691, it might have seemed logical for material supplementary to that to have a category in *Paralipomena*, like other printed works by Boyle.

As for why the list begins with the words 'Chap 1st contains', there are two possible explanations. One is that it is intended to indicate that 'Chap ... contains' was to be understood in each subsequent entry. The other is that by 'Chap', Boyle meant 'Book' or 'Tome'. As for the numbers that appear before each letter, there are also two possible explanations of these. One is that they provided a means of linking the titles back to the earlier versions of the list, which lacked letters. The other is that they simply duplicated the sequence of alphabetical letters and are thus superfluous: a parallel is provided by the use of both numbers and letters in 'The Order of My Severall Treatises'.

At this point, it is appropriate to comment on the headings included in this list and their relationship to what is known about Boyle's programme in his later years, as revealed by the various lists of his unpublished writings that survive, particularly ones dating from 1684 and 1691.<sup>35</sup> The different items in the list may be identified as follows. First, 'The Discernment of Suppositions' had appeared in the list of 'Tracts, as Essays &c' appended to one of the copies of 'The Order of My Severall Treatises' in the 1660s, and it recurs in a draft version of the list of Boyle's unpublished writings dated 3 July 1691, though not in the final recension; a handful of fragments relating to this work survive in the Boyle Papers.<sup>36</sup> The 'Essay of improbable Truths' had appeared in 'The Order' itself (as item P), and it recurs in the July 1691 list.<sup>37</sup> The third heading relates to the origin of gems, and the stress may be more on their 'origin' than on their nature, thus linking to Boyle's unpublished writings on petrification rather than to his treatise on *Gems* of 1672.<sup>38</sup> The fourth heading deals with

35 See *Works*, vol. 14, esp. pp. 341–4, 351–2.

36 See *Works*, vol. 14, pp. xlvi, 332; BP 9, fols. 13–16, BP 10, fols. 71, 149, 166; Royal Society MS 189, fols. 40v–1.

37 See *Works*, vol. 14, pp. 331, 351.

38 See *Works*, vol. 7, pp. 3ff., and vol. 13, pp. 363ff.



colour changes, explored in *Colours* (1664) but to which Boyle returned in *Experimenta et Observationes Physicae* and in his unpublished *Medicina Chromatica*.<sup>39</sup> The fifth heading is concerned with the subject matter of Boyle's unpublished 'Memoirs for the Natural History of Tin', while the sixth evidently relates to the 'Previous Hydrostatical Way of Estimating Ores' published as an appendix to *Medicina Hydrostatica* (1690).<sup>40</sup>

The seventh heading is comparable to the third; as with that, the stress is perhaps to be seen as on 'origins', hence linking with Boyle's writings on petrification. The eighth concerns Boyle's 'Dialogue on Transmutation', as published from surviving materials in the Boyle archive by Lawrence Principe.<sup>41</sup> The ninth, dealing with inflammability, echoes a title to be found in the 1684 inventories of Boyle's writings; it is perhaps to be linked to Boyle's *Flame and Air* of 1672, and to his unpublished dialogue on related topics.<sup>42</sup> The tenth heading relates to materials that Boyle had collected in connection with his medical interests and for which, as we saw above, he required a home after deciding against publishing a critique of orthodox views on this topic in the early 1680s.<sup>43</sup> No. 11, 'the Danger of too soon forsakeing Experiments upon probable reasons', apparently describes the materials on 'Sense, Reason and Authority' that survive in the Boyle Papers.<sup>44</sup> The twelfth heading, 'Air', relates to Boyle's ongoing work on this subject, the final instalment of which materialised as the *General History of Air* under John Locke's auspices in 1692.<sup>45</sup> The thirteenth head, concerning 'the History of Flame', is presumably linked to the same works as the ninth, though why it is presented separately is unclear. The fourteenth head, relating to what is described as 'the Essay of strange Narratives', presumably relates to the selection of 'Strange Reports' published in *Experimenta et Observationes Physicae*.<sup>46</sup>

The fifteenth, dealing with the surfaces of contiguous fluids, links to the paper on such topics published in *Philosophical Transactions* in 1677.<sup>47</sup> The sixteenth and seventeenth, on porosity, deal with matters relating to Boyle's published treatise of 1684 and to unpublished papers on the same topic.<sup>48</sup> The eighteenth, 'Particulars belonging to the Tracts of Effluvia', is self-evident

39 See *Works*, vol. 11, pp. 391–6, vol. 14, pp. 317–25.

40 See respectively *Works*, vol. 14, pp. 133–43, and vol. 11, pp. 253ff.

41 L.M. Principe, *The Aspiring Adept: Robert Boyle and his Alchemical Quest* (Princeton, 1998), pp. 223ff.

42 See *Works*, vol. 14, pp. 342, 344; vol. 7, pp. 73ff.; vol. 13, pp. 259–69.

43 See above, p. 188. For a full discussion, see Hunter, *Scrupulosity and Science*, ch. 8.

44 See *Works*, vol. 14, p. 351, and esp. BP 9, *passim*.

45 See *Works*, vol. 12, pp. 3ff.

46 See *Works*, vol. 11, pp. 427ff. See also the item with a comparable title (no. 24) in the verse mnemonic based on 'The Order', *Works*, vol. 14, p. 336, and see the discussion in Hunter, *Scrupulosity and Science*, ch. 10.

47 See *Works*, vol. 8, pp. 568–84. See also *ibid.*, pp. xl, xlii–xlii for ancillary material.

48 See *Works*, vol. 10, pp. 103ff., and vol. 14, pp. 75ff.



in relating to Boyle's published work of 1673.<sup>49</sup> The nineteenth, reverting to fire, is linked to the same works as the ninth and the thirteenth, and again its separate location is odd. The twentieth, on the mutual usefulness of speculative and practical physiology, exactly echoes the title of the unpublished Essay 13 of *Usefulness*.<sup>50</sup> Lastly, as we have seen, headings 21 and 22 deal with aspects of medical practice, the subject matter of the book on such topics that Boyle wrote between the 1660s and c. 1680 but subsequently suppressed.<sup>51</sup>

There are some oddities about the list, particularly the way in which three headings on what might seem the interrelated topics of inflammability, flame and fire are scattered at different points within it (and the third and seventh headings might also have seemed interconnected). On the other hand, there is a very considerable overlap with the subject matter of the unpublished writings on natural philosophy listed in the inventories of 1684 and 1691, including 'Improbable Truths', writings on colour changes, tin, transmutation, flame and inflammability, the *materia medica*, air, and pores and corpuscles. Only a handful of treatises that appear in the inventories are conspicuously absent here, notably Boyle's sequels to his *Mechanical Qualities*, the planned appendix to *Hydrostatical Paradoxes*, and 'The Requisites of a Good Hypothesis', while the topics that appear here but not in the inventories can mainly be accounted for on the grounds that the tracts in question had been published, namely the 'Hydrostatical Way' and 'Contiguous Fluids'.<sup>52</sup> Hence, the range of topics covered genuinely does seem to link to Boyle's ongoing agenda in his later years.

### ***Paralipomena*: Prefatory Material and Intended Rationale**

Turning now to Boyle's profuse and increasingly complex prefatory material for the work, we may start with the note which precedes four of the ten copies of the list of twenty-two titles (BP 35, fols. 190–1; BP 36, fols. 4, 36: these copies are also distinctive for the differences noted above). The following transcription is taken from BP 36, fol. 4, in the hand of Bacon corrected in that of Hugh Greg, which contains various words omitted from the other versions that improve the sense (see Plate 12).

Materials.

For the *Paralipomena*.

Whose twenty foure Titles are mentioned in this Page.

49 See *Works*, vol. 7, pp. 227ff.

50 See *Works*, vol. 13, pp. 350ff.

51 See above, pp. 188, 191.

52 See also above, pp. 182n, 190, for the slightly anomalous status of 'The Discernment of Suppositions'.

NB. 1. The Particulars that are here confusedly set down, are to be hence drawn out, and each of them refer'd to that Title to which it belongs in the Books «of Paralipomena» where these Titles each of them has more or fewer Leaves of Paper distinctly allotted to it. 2<sup>ly</sup> The Ordinall Numbers plac'd in the Margine of this Chaos are set down for the conveniency of References. «3.»<sup>53</sup> The Alphabetically Letter that accompanies each Number, shews to what Title, the Particular where«to»<sup>54</sup> the Number is prefix'd doe's belong. If<sup>55</sup> more Letters than one «accompany»<sup>56</sup> the same Number, all but the *first*, denote, that although the Particular belongs primarily to the Title signify'd by the *first* Letter, yet 'tis also referrable to the Titles pointed by the other Letter or Letters: And if no Letter at all accompanies any Number, 'tis a signe, that the particular belongs to one or other of those six last Chapters of the Paralipomena, that have no Titles importing their subjects prefix'd to them, (in the Books wherein an Account is given of the Designe, and Method of these Collections.[]]

The first point of this note emphasises the provisional status of *Paralipomena*. It is a repository of material 'confusedly set down', and destined to be 'drawn out' and recopied into a series of 'Books' structured according to the listed titles of *Paralipomena* (these books are not extant in the archive, assuming that they were ever realised). The second point records that the entries in this initial collection are to be numbered sequentially (with 'ordinal numbers'). This could imply that it was a collection not dissimilar to the workdiaries, either containing material recopied from there, or including new material. If so, it raises the question, which it is impossible to resolve, of whether the numbers are those given in the source from which the entries were copied or were new ones. Point three describes a further type of marginal annotation, by which entries will be given letters to show which of the *Paralipomena* titles they are to be referred to (this will facilitate the recopying advocated in the first point). It is interesting that the title of this document implies that Boyle aspired to a 'full' alphabet of twenty-four titles, though the surviving lists all fall slightly short of this.<sup>57</sup> This is clearly a flexible system: entries are allowed to be referred to multiple titles, as was also the case with the earlier list in BP 10, fols. 113–14, already discussed; presumably these would be recopied under each of the relevant titles in Boyle's headed books. Moreover, entries with no letters belong to six miscellaneous categories which apparently represent the six last chapters of *Paralipomena*, although these do not appear among the listed titles.

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53 Replacing 'And' deleted.

54 Replacing 'to' deleted.

55 Followed by 'there be' deleted.

56 Replacing 'to' deleted.

57 It is possibly worth noting here John Beale's invocation of 24 as the number of 'noble arguments now under your hand' in relation to Boyle's 'Sylva of promiscuous experiments' in a letter to Boyle of 16 February 1681 (*Correspondence*, vol. 5, p. 241).

Evidence of a further stage in the evolution of this increasingly complicated framework for manipulating data is found in the form of a document entitled 'Advertisements', which exists in an early version at BP 36, fol. 64, and in corrected form, transcribed here, at BP 36, fol. 93v (both are in hand B).

1. For the conveniency of Citations & References 'tis thought fitt that the numbers præfix'd to the particular sections or Paragraphs of each Chapter be retained & kept unvaried; tho all that is contain'd in the Paragraph that Number relates to should be transfer'd to this or that among my other writeing whereto it belongs, which translation may be knowne to have been made by the sections being travers'd with two cross lines or by the contracted word Tsd placed in the Margent. 2. Tho most of the Chapters of these Paralipomena consisting of Particulars throwne together without Order have no titles but only ordinal Numbers præfixt to them; yett because the particulars contain'd in some other Chapters are for the most part referable to some distinct subject handled in some one of my other writeings 'twas thought fitt to præfixe (in a Parathesis or Parenthesis) to every such Chapter a title intimateing the cheife subject treated of in it & the like is done hear & there in the Margent of this or that Paragraph of particular Chapters where it readily occured to me to which of my other writeings that Paragraph was referable. To each of these Marginall Notes the words *this belongs* or *this may conveniently enough be refer'd* for brevity sake must be conceiv'd to be præfix'd.

These points are then absorbed, as paragraphs 2 and 6, into a longer document, copies of which survive in BP 25, pp. 223–4 – accompanying the fullest list of chapter headings on p. 222 of that volume – in BP 35, fol. 214, and BP 36, fol. 3. The BP 25 version has been chosen for inclusion here as it includes corrections in Boyle's hand in paragraphs 3 and 4. Moreover, the BP 36 version comprises only notes 1–6, either because a second page is missing (the current text ends at the bottom of a page), or because the final paragraph was added later. That the latter could be the case is suggested by the survival of a draft of this paragraph in the hand of Hugh Greg in MS 199, fol. 143.

#### Memoirs

For divers parts of Natural History

Treated of by Mr. Boyle

who designs these Papers for Paralipomena  
and Additions to his other Physical Writings.

#### Advertisements

1. The Particulars that are here confusedly set down, are to be hence drawn out, and each of them refer'd to that Title to which it belongs, in the Books where these Titles, each of them has more or fewer Leaves of Paper distinctly allotted to it.  
2. The ordinal numbers plac'd in the Margent of this Chaos, are set down for the conveniency of References. And for the same reason, 'tis thought fit, that these Numbers be retain'd and kept unvaried; thô all that is contain'd in the Paragraph



that Number relates to, should be transfer'd to this or that among my other writings whereto it belongs: And you may know this Transcription to have been made by the Mark or Letters *Tsd*, which by contraction is put for *transcrib'd*.

3. The Alphabetical Letter that accompanies each number, shews to what Title the Particular whereto the number is prefix'd, does belong. And if there <be> more Letters than one that accompany the same Number, they denote, that, althô the Particular belongs primarily to the Title signify'd by the first Letter, yet 'tis also referable to the Titles pointed to by the other Letter or Letters. And if no Letter at all accompanies any number, 'tis a Signe (thô not a sure one) that the Particular belongs to one or other of those <twelve><sup>58</sup> last Chapters of the *Paralipomena* that have no Titles importing their Subjects, prefix'd to them (in the Books wherein an account is given of the Method and designe of these Collections.)

4. My occasions not permitting me to write alwayes in the same house, it was thought fit to keep some of the following Papers in one Lodging, and some in another: And for the more convenient making of References, the first set of Papers begins with the <Page & Number I, the second with the <501st Page (& the 3001st Number><sup>59</sup> which will breed no confusion, in regard no Number is refer'd to, that has not a Paragraph (at least a cross'd one) annexed to it.<sup>60</sup>

5. And because it often<sup>61</sup> happens, that more than one or two Particulars occur to me at once, that may all of them, thô perhaps in differing respects, relate to the same Subject; they will be found written in the order wherein they came to hand, and be known to belong to the same matter, *either* by having *Item*, or the Contraction *It*. prefix'd to them; *or* by having Ordinal Numbers of their own included /p. 224/ in Circles or small *Parentheses*, annex'd to the *Series* of Ordinall Numbers that belongs to the whole Collection.

6. In regard, the Titles of the *Paralipomena* do not comprize all the Subjects treated of in my Physicall writings, much less the Sections or Subdivisions of them; I thought fit on divers occasions (sometimes even where there is an Alphabetical Letter or two adjoyn'd) to set down briefly in the Margent, an intimation of the chiefe Subject, that Paragraph or Particular is referable to. And to Each of these Marginal Notes the words, *This belongs*, or *This may be conveniently enough refer'd*, must for brevity's sake be conceiv'd to be prefix'd.

7. In the 500 Pages of the first Tome, the Numbers prefix'd to the Particulars are set down in their natural order. viz. 1. 2. 3. 4. &c. (as in a simple Arithmetical Progression beginning from an unite,) but the Particulars that follow one another, are not alwayes written down immediately after one another, nor perhaps in the same Page or Leafe; in regard that divers of the Memoirs were separately written in loose Papers, and were some of them very much longer than others: upon which account I contented my self to pin or tack them together, and put most of those that were somewhat prolix, tack'd together by themselves, at the latter end of this first Tome; to which I allotted from an unite to 3000. to be sure to have ordinal

58 Replacing 'six' deleted.

59 Followed by '301 and the third with 501' deleted.

60 Adjacent to the text at this point is a marginal note in Boyle's hand: '501 3001 see the 7th Advertisement'.

61 Altered from 'oftens'. Five words later, 'one' is followed by a deleted comma.



Numbers enough for all the Particulars to be compriz'd in this first Tome. And therefore as the second begins with <Page> 501, so the Number prefix'd to the first Particular, is 300,<sup>62</sup> and in this Tome also, the more prolix Memoirs, and those that chance to be found in loose Notes, are dispos'd of, as the like Papers were in the former.

These 'Advertisements' clearly represent a development of the brief notes attached to the chapter headings, as discussed above. The clarifications which they introduce can perhaps all be characterised as reactions to the scale and complexity of the problems of data management raised by the scheme. Thus in the second advertisement Boyle specifies that when entries are transcribed from the initial version (presumably into the 'Books' which are structured by title) they will retain their sequential number, and the initial entry will be marked as having been transcribed. In the third advertisement, the number of miscellaneous categories is increased from six to twelve. The fourth point allows for two collections of entries to be kept simultaneously in different locations. To avoid the potential confusion of having more than one entry with the same number, the first of these will begin with entry number one, while the second will number its first entry 3001. The sheer scale of the *Paralipomena* project is indicated by the allocation of 500 pages and 3000 entry numbers to the first tome (although in point seven Boyle explains the choice of 3000 as being a number so large that he could 'be sure' he would not exceed it). This implies that entries are being given new numbers, rather than recopied old ones.

Point five allows for a series of related entries to be counted as various items within a single entry number. Point six allows for entries to be referred to works and topics other than those listed in the chapter headings of the *Paralipomena*. Boyle proposes a means whereby entries can be referred to subjects treated in any subdivision of any of his 'Physicall writings' by marginal descriptions. He thus makes provision for the elaborate list of twenty-two or twenty-three titles with its alphabetical indicators to be circumvented. Here, as in the provision of the miscellaneous categories, Boyle is stretching the scheme to accommodate material which lies outside its original remit. Point seven confesses another complication. Not all of the entries in *Paralipomena* have actually been copied into a single sequence. Rather some of the items which are to count as part of the numerical sequence are written on loose leaves, which are to be bound all together at the end of each of the tomes, leaving gaps at the relevant place in the main sequence. The complexity of these advertisements reinforces the sense of the complexity of Boyle's system: his attempt to manage his documents is clearly time-consuming and evolving.

It is now appropriate to discuss the 'Preface' which precedes the version of the 'Advertisements' in BP 25, pp. 217–19, and survives in an almost identical copy in BP 9, fols. 45–6 (the only difference is that the latter text is broken into

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62 Altered from '3000'. Four words later, 'Tome' is followed by a deleted comma.

fewer paragraphs). This text not only represents a general introduction to the concept of the *Paralipomena*; it also indicates its intended setting through the marginal note which accompanies both versions: 'NB. This Preface and all the Chapters of the Paralipomena, that it belongs to, are to be added, as a kind of *Appendix* to the Collection entituled *Experimenta et Observationes Physicae*'. This is revealing: as we saw earlier, *Experimenta et Observationes Physicae* itself consists of miscellaneous data roughly sorted by topic, preceded by 'Advertisements' which repeatedly invoke a Baconian precedent for the work's form and rationale. The text of the 'Preface' echoes some of the themes addressed in the preliminary material there, to which the reader is explicitly referred:

#### The Preface.

In the foregoing Tract Entituled *Experimenta et Observationes Physicae*, so many things have been said, that are almost as properly applicable to the following Papers, as to those to which they were primarily intended for a Preface, that, to avoid repetitions, I shall referr you thither for those things that you may find there, fit to be premis'd to the Ensuing Papers: whereof I shall therefore content my selfe in this place, to offer you a breife account; which by telling you the occasion of my writing them, will conduce much to acquaint you with the *Nature* and *designe* of them.

The Objects of the study I was ingaged in, being such vast and fertile ones, as the Lawes & workes of Nature & Physicall Arts, (if I may so call those that mannage her Productions,) there could not but, from time to time, occur to me, either in the Book of Nature it self, or in some of those Authors that have written larger Comments, or shorter glosses, upon certaine Passages of it: there could not, I<sup>63</sup> say, but occur to me some Experiment, Observation, or other thing, that would be pertinently applicable to this, or that particular Paper of mine: Of this I became more sensible,<sup>64</sup> when, after divers of my Physiologicall Treatises were *publish'd*, and severall others *written*; I had occasion sometimes to look into my Memory, and sometimes to review those loose Memorials, divers of which were not at hand, and more were unconsulted by me, when those Tracts were written.

Wherefore, finding that the Number of such particulars of this sort, that had been supplied me, partly by my own subsequent Tryals, and partly by some Passages I had taken notice of in the writings of Travellers, and in some other Books; amounted to<sup>65</sup> a not inconsiderable Number: I was not uneasily perswaded, it was not fit that all those Particulars should be lost; especially since *some* of them were *Experiments & Observations*, that might (perhaps) be fit to be received among the *Materials*, that are gathering in this Industrious Age, towards the *History of Nature*. And as to some *others*, as well as divers of *these*; in case those writings of mine they peculiarly relate to, shall be thought worthy to be reprinted & transcrib'd, they may, with convenient Transitions, /p. 219/ and other wayes of Connection,<sup>66</sup> be inserted in proper places of those Treatises.

63 Altered in composition.

64 Altered in composition.

65 Followed by a deleted comma.

66 Altered from 'corrections'.

Having therefore got some little leizure, thô frequently interrupted, I did at times, partly *dictate* and partly cause to be *transcrib'd*, out of my own *Memory & Notes*, and out of some printed Books, such things as readily occur'd, as referable to this, or that head, or Title; without any other order, then that wherein I chanced to light on them. Which want of Method I was not *solicitous* to avoid, because this indigested heap was meant to be but a *Collection of Materials*, to be afterwards *rang'd* in the places, where they could fitliest be brought in. And <for as much as><sup>67</sup> *some* of them belong'd to Papers that were yet unfinish'd, and so might be called *Addenda* <& yet *most* of them, if I had seasonably had them at hand, should have found place in the Treatises already *publish'd* or *written* <and on that account may now be called> *Paralipomena*, or pretermitted things; I thought fit to comprize both under the comprehensive Name of *Memoirs*. And by reason I had not the leizure, to draw together *all* that I designed should be refer'd to this Collection, towards the encrease of which my course of Life, makes it probable that time may not a little contribute: I gave to those particulars, that will now be found refer'd to this or that Title, or Chapter, the Stile of the *First Section*; to leave Room for such Additions, as, if God vouchsafe me Life & health, 'tis not unlikely I may hereafter make.

But forasmuch as the twenty foure Chapters, that have distinct Titles in these Memoirs or *Paralipomena*, are far from reaching to, or comprizeing, All the Subjects treated of in my severall writings; it was thought fit, besides those chapters <whose Titles><sup>68</sup> express the Principall Subjects, to reserve some (chapters) for such particulars as cannot so pertinently, or without seeming violence, be refer'd to any of the twenty four.<sup>69</sup> And therefore the Chapters whereof this *Chaos* is to be made up, have no<sup>70</sup> distinct Titles prefix'd to any of them: but are to be look'd on in Common, as *Repositorys of Promiscuous Paralipomena* or memoirs, thô here & there in most of them, divers particular Experiments Remakes, & Citations, have in the Margent some few words, intimating the Subject, each of them chiefly belongs to. And because the Materials thrown together in this *Chaos* are like to be somewhat Numerous, it was thought convenient, that the chapters allotted to receive them, should not be fewer then twelve; least they should, as well upon the account of their Prolixity, as I fear they may upon other Scores, be judg'd tedious.

According to this presentation, then, *Paralipomena* represents a collection partly of material relating to natural philosophical works already published, and partly of miscellaneous data deemed of sufficient intrinsic value to warrant preservation in a relatively disordered grouping under heads. It simultaneously allows for the further collection of material on topics on which Boyle has already published, and, in the further miscellaneous categories, for the collection of new data on a wider range of topics.

The extent to which *Paralipomena* was a means of realising the potential of data collected in an unsystematic way (and a sense that this previous

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67 Replacing 'because the' deleted.

68 Replacing 'which' deleted.

69 Altered from 'foure'.

70 Altered from 'noe'.



incarnation in some ways limited the application of the later rationale) is clear from a document in the hand of Bacon in BP 9, fol. 29 (an emended draft version in the hand of Thomas Smith survives at BP 9, fol. 95, which has many false starts in the sentence 'But, that this confusion ...'). This is not explicitly related to *Paralipomena*, though it *is* linked by the concept of 'Memoirs' which we have seen emerging almost as an alternative title to the work in the 'Advertisements' and 'Preface' just quoted: in fact, it seems to relate to a collection of material on different qualities which echoes Boyle's division of natural history in his letter to Oldenburg on this topic of 13 June 1666.<sup>71</sup> On the other hand, it makes sense in the context of the material just discussed. Again the uneasy balance between maximising the application of the archive and retaining its flexible miscellaneous character is evident.

To give you some direction, how to make use of the Ordinal Numbers that you will find prefix'd to the insueing Memoirs, I shall again acknowledge to you, that I threw most of them into the following Collection, or rather Bundle, without being careful to observe any Other Order than that wherein I lighted on the Papers it consists of,<sup>72</sup> assigning to each of them the Ordinal Number that next follow'd that which I had last imploy'd. But, that this confusion, which the haste wherewith I was oblig'd to throw together Memoirs so loos and of such differing Qualities <occasion'd> might give you<sup>73</sup> as little trouble as the Nature of the thing will admit, I thought fit to subjoin, at the end of the Collection, a kind of *Index* of the Subjects treated of in it; and to each of these Heads to referr those particular Experiments and other Notes, that seem more properly referable<sup>74</sup> to It than to any of the rest, that so such as may belong to one Subject, thô they be blended among many others, may be easily drawn out from among them, and laid together in order to an account of that particular Quality. And,<sup>75</sup> thô I met with <severall> Papers that contain'd not altogether inconsiderable parts of some intended cohærent Discourse about this or that Quality <& for that reason><sup>76</sup> thought fit to allow them place <in this Collection; yet, as><sup>77</sup> because they were far from being finish'd, I did not much scruple to join them to the other *Memoirs* <(whether they were or <were> not of their size) so><sup>78</sup> I was somewhat unwilling to break these large Fragments into many lesser ones, but thought it more expedient to leave them as intire as I found them; only adding Ordinal Numbers to the chief Passages whereof they consist, that so they may be the more easily taken asunder, and added to the loose Memoirs, if there be any (in the Collection,) relating to the same Quality, by any that shall have a mind to finish what was design'd and begun about it.

71 *Correspondence*, vol. 3, pp. 170–5, esp. p. 174.

72 Altered in composition.

73 Followed by a deleted comma.

74 Altered from 'referrable'. Two words later, 'It' altered from 'that' and 'than' from 'then'.

75 'A' altered from 'a'. Five words later, 'severall' replaces 'some' deleted.

76 Replacing 'yet I' deleted.

77 Replacing 'among the other Papers; but' deleted.

78 Replacing 'that were much larger, yet' deleted; within the insertion, 'yet' is deleted before 'so'.



Here, we seem to be presented with miscellaneous data presented in the order in which it was collected, but provided with an index (a concept taking us back to some of the earlier documents discussed in the second section of this chapter), using which others would be left to reorganise it. It is, in a way, the logical culmination of the increasing stress on the value of record, if necessary at the expense of systematisation, which appears in the prefatory statements to Boyle's *Paralipomena*.

### ***Paralipomena*: Content**

This sense of the value of particulars in their own right is also borne out by the surviving fragments of text that may be identified as part of the content of *Paralipomena*. Some items fall more clearly into this category than others. Thus certain of the recopied extracts from workdiaries discussed in appendix 2 to chapter 3 may have been intended for *Paralipomena*, although, since they are not explicitly so endorsed, it is difficult to be sure of this. An example of this is BP 26, pp. 78–89: since it is hard to discern a common denominator in the items selected, we may possibly have here an example of the miscellaneous material that would have gone into the latter part of the book. If so, it implies that original numbers *were* retained.

A more thematic example is provided by BP 38, fols. 95–6 (Plate 6), a series of entries dealing with aspects of the history of the air, and thus possibly relating to the title devoted to this topic in *Paralipomena*, though it could equally easily be linked directly to the posthumously published *General History of the Air*, in which some of this material does indeed appear.<sup>79</sup> Another document with a similar possible significance in relation to *Paralipomena* is a series of extracts dealing with precious stones, again copied from Workdiary 21, in this case entries 514, 563, 602 and 631, which now survive as BP 25, pp. 241–3: these have the pencil title 'Particulars belonging to the Origin of Gems', which directly echoes the third title in Boyle's list of chapters for the work, though it also echoes the title of Boyle's book on this topic published in 1672 (and the fact that the document is in Slare's hand may favour a such a date for it).

Only two items are specifically identified as belonging to *Paralipomena*, namely a pair of experimental observations entitled 'Memoirs for the Paralipomena' in BP 10, fol. 6, which is printed below, and a whole series of copied extracts so marked in BP 25. The latter forms part of a group of papers relating to this work, including the fullest copy of the preliminary material dealt with in this paper and the recopied extracts on gems dealt with in the previous paragraph. The relevant section is printed as an appendix. Both this and BP 10, fol. 6, seem likely to derive from workdiaries now lost, meaning that it is impossible to be sure how much their content may have been the subject of

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<sup>79</sup> See *Works*, vol. 12, p. xvii.

reorganisation prior to reaching its current form. It is perhaps worth noting here that neither has numbers of any kind, contrary to the implication of the instructions already cited that entries would either retain their original numeration (as in the instance noted in the last paragraph) or would be given new numbers as they were inputted, thus suggesting that Boyle may not always have been systematic in implementing the prescriptions in his prefatory material.

The section in BP 25 is a coherent group of material comprising three bifolios written on both sides, with the running head 'Memoirs for the Paralipomena' written at the head of the first side of the first and third, and at the top of all four sides of the second. (Whether the three bifolios, each of which is self-contained, are in their original order is unclear.) Each covers a wide range of disparate topics juxtaposed in an almost random-seeming order (the fact that they are described as forming part of 'the 2nd Tome' implies that they belonged to the section of the work paginated from 501 onwards). As will be seen, some entries are very miscellaneous and unreflective; others – particularly those on pp. 249–51 – are more elaborate descriptions of experiments or observations, including reflections on their rationale and significance. A disproportionate number of items seem to be about diamonds, which may reflect some degree of thematic arrangement (possibly aimed at the title on the 'Origine of Gems'), though the rest is very miscellaneous. What is interesting, however, are the papers interspersed among these items in BP 25. Apart from pp. 141–3, the extracts concerning gems that have already been discussed, pp. 233, 235 and 237, comprise separate transcripts on individual sheets of paper of three items that appear in the miscellaneous sequence of entries headed 'Memoirs for the Paralipomena'. It thus seems likely that they illustrate the process of redistribution going on, with entries originally copied as part of a miscellaneous collection being separated out so that they could be directed to the treatise to which they belonged. If this is the case, then certain other leaves comprising copies of individual entries which survive elsewhere in the Boyle Papers may bear witness to a similar process, though there is no evidence that this occurred via *Paralipomena*.<sup>80</sup>

As for the section in BP 10, fol. 6, this comprises more elaborate and reflective descriptions of experiments like the comparable items in BP 25. It may be quoted *in extenso* here to give a flavour of what the actual text of *Paralipomena* might have been like (the heading is in the hand of Bacon, the text in hand B):<sup>81</sup>

#### Memoirs For the Paralipomena

Among the Examples of *Attraction* that of smoak by fire is confidently urg'd because it seems manifest that the smoake takes its course directly to the fire that burns in the Cimney if the smoaking Body be conveniently placed tho at a pretty distance

<sup>80</sup> See above, chapter 3, appendix 2.

<sup>81</sup> It is marked 'Tbd' in the margin adjacent to the start of the text.

off. And to<sup>82</sup> strengthen this objection I shall add that if you place a Candles end or a Candle it selfe lighted upon a harth before the fire tho at a pretty distance from it & then blow out the flame of the Candle there will stream from the snuff as it were a rivelett of smoake which without much mingleing with the Aire will take its course directly enough to the fire.<sup>83</sup>

And yett<sup>84</sup> effects *«of this nature»* which *«are»*<sup>85</sup> so generally presum'd to evince attraction I conceive to be really produc'd by meer pulsion. And accordingly I thus explicate the Phænomenon. The heat of the fire rarifying the Aire in the Chimney makes it unable to resist the weight & pressure of the Colaterall, & rarified Aire which therefore moveing *«streamelike»*<sup>86</sup> towards the<sup>87</sup> fire to supply the Roome of the Aire expell'd by the fire *«easily»* drives before it such *«a»* light Bodys as smoak. That there is<sup>88</sup> on these occasions such a kind of circular motion of the Aire you may perceive if you shutt close the windows & dores of a Roome (especially if it be not great) wherein there is a good fire for holding the flame of a lighted Candle at a considerable distance from the key hole but in a direct way from thence to the fire the flame will be manifestly blowne by the Aire crouding in at that hole nearer to which the same wind *«may»* be also felt by the hand it selfe. And the same motion will appear if a peice of paper or a feather or some such light Body be<sup>89</sup> *«kept»* suspended by a thread in the place where the hand was held. And now to show that the motion of the smoak of a<sup>90</sup> /verso/ *«our above mentioned»* Candles snuff proceeded from the impulse of the stream of the Aire I employ but a very slight expedient which was to take a fire shovell & hold it so that it might cover the snuff from the Aire that press'd towards the Chimney, for then the smoak being sheltered from the Current of the Aire did not as before move almost in a levell towards the fire but assended directly upwards as far as it was fenc'd by the shovell which fence when 'twas depriv'd of its motion would againe tend towards the fire. And the like difference may be observ'd in putting a little water or other evaporable Body upon a warme harth & afterwards placing a fire shovell so as to hinder the<sup>91</sup> misty vapours from being blown towards the fire.

<sup>92</sup>A learned writer observes it as a strong property in Diamonds that when two of them have had there broad surfaces rub'd against Each other, the uppermost will take up the lowermost that is the former being lifted up the latter will not forsake it but be rais'd with it which odd Phænomenon this learned man ascribes to attraction.<sup>93</sup> But this is no property peculiar to the Diamond & dos in occult quality for the cause of the adhesion of the two gems is the pressure of the Ambient Aire

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82 Followed by 'confirme' deleted.

83 Followed by '&' deleted.

84 Followed by 'this' deleted.

85 Replacing 'as' deleted. Four words later, 'to' is followed by 'be wrought flow from attra' deleted.

86 At the start of the inserted passage are the words 'as it were in a' deleted.

87 Followed by 'Chim' deleted.

88 Followed by 'such' deleted.

89 Followed by 'held' deleted.

90 Followed by 'Candles' deleted.

91 Followed by 'Evaporati' deleted.

92 Marginal endorsement: 'Tbd'.

93 It is not clear who Boyle is referring to here.



which touching them every where but where there polite surfaces are contiguous<sup>94</sup> thrusts them against each other with more or less force as the surfaces between ~~which~~<sup>95</sup> there is ~~very~~ little Elasticall Aire to resist the pressure of the Externall Aire, happen to be large & congruous. This reason will be more easily omitted if I add that upon this ground I have made ~~at least~~ three or four<sup>96</sup> pollish'd Bodys take one another and remaine suspended in the Aire tho none of them was a Diamond, all being very smoth peices of ~~a~~ common Glass plate.

As will be seen, this comprises recopied extracts on the attraction of surfaces and particles, presumably from different sources, and the juxtaposition may reveal a deliberate grouping on Boyle's part. If so, it raises the question of which of the thematic chapters the text might have been intended for: here the obvious answer would seem to be the one devoted to 'various Observations about the Air'. On the other hand, the second extract, in particular, seems likely to bear out Boyle's sense that data like this had an intrinsic value regardless of the thematic use to which it was put, in that it deals with one of the classic issues in the experimental philosophy of the day, arising from one of Boyle's most famous experiments in his *Spring of the Air*, and which was to be the subject of differing interpretations in the context of early eighteenth-century Newtonianism.<sup>97</sup> Hence the extant sections of text, like the prefatory material, seem to bear out the tendency for the thematic thrust of Boyle's initial plans for *Paralipomena* to be overwhelmed in practice by his enthusiasm for specific instances in their own right.

### ***Paralipomena*: Its Overall Rationale and Boyle's Intellectual Method**

What conclusions can we draw, therefore, from this material, both the extant specimens of the content of the work, and the various, increasingly convoluted, sets of instructions that have been presented here?

In its aim to exploit the profuse data that Boyle had accumulated during his career as a means of adding to and improving upon experimental natural histories that he had already written, the *Paralipomena* project represents an extension of an impulse previously visible in specific works in Boyle's corpus, as with Boyle's use of 'Titles' to structure the appendix added to the second edition of *Cold* in 1683 or the unpublished material relating to *Human Blood* already referred to. The *Paralipomena* project should be seen as an extended implementation of this rationale to cover a variety of subjects: as we saw earlier, the lists of between twenty and twenty-three chapters evidently

94 Followed by 'it' deleted.

95 Replacing 'whom' deleted.

96 Followed by 'well pollish'd' peices of a flat' deleted.

97 See Steven Shapin and Simon Schaffer, *Leviathan and the Air-pump* (Princeton, 1985), pp. 199–201.



represent those topics on which Boyle believed that he had significant quantities of data, relating to works either published or unpublished. Each of these was apparently to have had a section comprising a set number of leaves allocated to it, to which the relevant data would be transferred.

If the ultimate goal appears to have been the fully structured version of *Paralipomena* as outlined in the chapter headings, however, it is apparent that Boyle's initial efforts to realise this took the form of presenting an unsorted body of material, within which nuggets of data relating to the specific works itemised in the list of chapters would be denoted by the appropriate alphabetical letter, this coding implying where they would ultimately be placed in the finished work. Only in a second phase would the entries in question be transferred to the discrete sections represented by the chapter headings. Further complications are added by the fact that, as Boyle's prefatory material emphasises, certain entries might be referred to more than one chapter, while a single entry might contain more than one particular. Clearly, this complicated the task of transferring data to its thematic destination. Indeed, the lack of clarity about the rationale of the project may reflect the extent to which it evolved as Boyle attempted to implement it.

Moreover, although the lists of chapters imply that material would be sorted by theme where appropriate, with only a residue being left unsorted, the extant prefatory statements complicate this, referring to miscellaneous categories which arguably undermined the coherence of *Paralipomena*. From the outset, Boyle made allowance for a series of chapters devoted to undifferentiated material, initially six, though it is revealing that this was then increased to twelve. Clearly the balance between the thematic and the miscellaneous shifted even as the work was in progress. It is perhaps worth noting that it is not clear on what principle – if any – material was to be allocated to different chapters within this section of the work, or whether material was going to be sorted at all, as against simply being placed here in the order in which Boyle had originally recorded it. This might have been explained by the 'Booke wherein an Account is given of the Designe and Method of these Collections' to which Boyle refers, which is not extant. One possibility – perhaps borne out by extant sections of text like that presented in the appendix to this chapter – is that the *Paralipomena* might have been a kind of formalised version of Boyle's workdiaries, perhaps slightly edited, but presenting material very much in the order in which Boyle had accumulated it, and assisting readers to digest it through annotation more than reorganisation.

One might even argue that there was an inbuilt tension between the concept of the *Paralipomena* and the thematic arrangement to which Boyle evidently aspired, in that, insofar as material was sorted thematically onto a self-contained group of sheets of paper, it might have seemed more appropriate for this to be re-routed to the treatise to which it was deemed appropriate – perhaps particularly if this was an unpublished one – than for it to remain part of

a miscellaneous collection such as *Paralipomena* at all. This is clearly what happened with the *Cold* and *Human Blood* material that we have a record of, and it is quite likely that it was also true of other material thematically sorted. It is thus possibly revealing that we lack any examples of information sorted by topic (unless the specimen quoted in the previous section is an example of this). Of course, matters are complicated by the tantalisingly incomplete survival of Boyle's papers, which means that we cannot be sure that such collections may not once have existed and now be lost, but it could equally easily be due to the fact that Boyle faltered as he attempted to organise data by theme. In other words, the *Paralipomena* project was essentially a transitional one, lacking in permanence insofar as the sorting associated with it rendered data more appropriate elsewhere, in the treatises to which these titles related. Hence what remained in *Paralipomena* itself was characteristically miscellaneous, and it is perhaps for this reason that Boyle seems increasingly to have stressed the intrinsic value of the data that it contained, rather than attempting to impose order on it.

Overall, the impression created by the *Paralipomena* is complicated and at various levels frustrating, though this does not make it any the less revealing in understanding Boyle's intellectual method. There does seem to be a tension between the impulse to impose a thematic structure and the sense that the intrinsic interest of the data made all such efforts more or less arbitrary: this seems itself to have induced increasing indolence in the classificatory impulse, as reflected in the telling comment in the 'Advertisements' that the lack of any such classification of material in the miscellaneous section was 'a Signe (thô not a sure one)' that no such classification was possible. Beyond that, however, we see a tension intrinsic to Boyle's Baconianism. It was not just a problem of document management, of failing in practice to implement an elaborate system devised in theory – though such problems undoubtedly occurred in Boyle's case, as they did with John Evelyn and John Locke, recent studies of whom have revealed their failure to put into practice elaborate classificatory systems that they devised.<sup>98</sup> In other words, it would not be surprising if Boyle was never able to implement a system of organizing and cataloguing the mass of data that he had accumulated. But the matter also takes us to the heart of Boyle's natural philosophy, since the corollary of his repeated criticism of those natural philosophers who tried to build large explanatory schemes on a small selection of empirical data was to make him value piecemeal data so highly that it seemed better to present it unsorted for its intrinsic interest than to abandon it along with attempts to dragoon it under thematic heads. Like the published *Experimenta et Observationes Physicae*, *Paralipomena* ended up unapologetically miscellaneous. As such, it tells us much about the nature of Boyle's science.

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98 See G.G. Meynell, 'John Locke's Method of Commonplacing', *The Seventeenth Century*, 8 (1993), 245–67; Guy de la Bédoyère, 'John Evelyn's Library Catalogue', *The Book Collector*, 43 (1994), 529–48.

## Appendix

### Section of Text from *Paralipomena*

This appendix presents the longest section of text that can be identified as belonging to *Paralipomena*, as is made clear by the running title on various of its pages, 'Memoirs & Paralipomena the 2<sup>d</sup> Tome'. It contains the bulk of BP 25, pp. 225–52, and is preceded by the prefatory material that has been quoted at length in the course of this chapter (BP 25, pp. 217–24). Interspersed within it are the items that have been discussed in the text, notably recopied sections of the text on separate sheets of paper on pp. 233–7, and recopied entries from Workdiary 21 on pp. 241–3 (entries 514 and 631 on p. 241 and 563 and 602 on p. 243). Between them (on pp. 239–40) is a further item, an extract from a Latin medical book, which is clearly extraneous and has not been included here, and the same is true of pp. 245–7, 'A Description of the Trew Thermometer', with the endorsement (subsequently deleted) 'Mr Wicks' Description of his Weather Glasse'; this is evidently a holograph manuscript (for a copy of it in the hand of Bacon, see BP 9, fols. 81–2). Pages 225–7, 229–31 and 249–51 each consist of a bifoliate; the running head 'Memoirs and Paralipomena the 2<sup>d</sup> Tome' is written on the first side of the first and third bifoliate, and on all four sides of the second. (The heading has here been given at the start of each section, but is recorded in a footnote where it is interspersed in the text.) Following them is a single cover page, p. 253, not necessarily connected to the surrounding pages, which might perhaps have originally been the cover sheet for the section that precedes it (the material that follows it is much more disparate, consisting mainly of extracts from books). The text of this is as follows:

Memoirs  
For Divers parts of Naturall History  
Treated of by Mr Boyle.  
Who designes these Papers for Paralipomena  
And Additions to his other Physical writings.  
The [blank] Section.

This title and all but the first of the headings are in Bacon's hand, as is the bulk of the text. However, certain sections on pp. 225–7 and 251–2 are in the hands of Greg and an unidentified scribe, while certain passages on pp. 229–31 are in Boyle's hand. These are noted at the point where they occur: it may be presumed when not otherwise stated that the text is in Bacon's hand. The text of the sustained section which begins on p. 225, following the introductory material to *Paralipomena* on BP 25, pp. 217–24, is as follows:



Memoirs & Paralipomena the 2<sup>d</sup> Tome

<sup>99</sup>We caus'd some fine Filings of Steel to be long Reverberated, viz. [space left blank] But the Laborant having spread it too thick (for in some places it was near half an Inch) thô the whole bed or layer was manifestly alter'd in Colour by the Operation of the Flame, yet only the superficial parts of it to an inconsiderable depth, were turn'd to a true *Crocus Martis* that was high colour'd. Some of these Red Corpuscles we scrap'd off, and applying to them a good Load-stone, thô some of them stuck to the Steel Capes it was arm'd with, yet it appear'd to work on them but faintly, & retain'd but few of them comparatively to what it would have done if the Fire had not much alter'd them, as was manifest by the great quantity the same Load-stone drew & sustain'd of the Filings that lay under this *Crocus*, notwithstanding the «visible» change made on them by the Fire.

Die Septembris 6<sup>o</sup> 1678.

Tartarum in vacuo inclusum vitro ustorio in cineres redigere tentavi, illud ad albedinem reduci nequaquam potuit.

14<sup>o</sup> Septembris.

Ejusdem tartari quantitatem aliam in aere, combussi:<sup>100</sup> Quanquam autem Sol minus vividos radios impingeret, tartarum ad albedinem usque brevi calcinatum est.

The Cartesian Hypothesis about the change of water into Ice, by the Transition of those grosser Corpuscles that kept it fluid before may be illustrated by<sup>101</sup> the following Experiment that I made for that purpose. I took some Oyl of Camphire, made by the help of Aqua Fortis, and pour'd a little of it leizurely into a shallow glass, wherein the Water, «but»<sup>102</sup> not «near» 2 Inch, continueing<sup>103</sup> to pour in the oyl, til it had reach'd to the bottom of the water. The event that according to my conjecture<sup>104</sup> ought to ensue, was to be this, that the nitrous spirits that were harbor'd in the Camphire «& by their various motions»<sup>105</sup> kept it fluid, would pass into the water, & thereby leave the Stable parts of the Camphire to concrete and accordingly I found that the acid spirits or particles of the Oyl did suddenly pass out of<sup>106</sup> that Liquor into the water. which was a Vehicle more congruous to them. And by forsaking the Camphire left it in a consistent forme,<sup>107</sup> & endowed even with brittlenes, so that it was

99 Hand: Greg, as far as 'by the Fire'. The handwriting of the heading is uncertain. After 'viz.', there is a space of approximately six words.

100 'aere' altered from an illegible word and 'combussi' altered from 'combusti'.

101 Followed by 'what happens' deleted.

102 Replacing 'was' deleted.

103 Altered from 'continued'.

104 Altered from 'conjectur'd'.

105 Replacing 'and' deleted.

106 Followed by 'the former' deleted.

107 Followed by 'so that' deleted.



unpleasant<sup>108</sup> spectacle to see a little pillar of a substance, naturally Lighter /p. 226/ then water, stand in the midst of that Liquor, and reach from the surface at the bottom of it.

An Ingenious Person, that hath dealt much in mynes, or *if you please* Quarries, of Loadstone, answer'd me, that he<sup>109</sup> has several times found *that* Loadstones in the great Furnace<sup>110</sup> wherein they melt their Tin-Oares, would by the bare force of Violent Fires be brought to yield good Iron, & in *as* considerable quantity too as severall Iron Veins that yet were thought worth working. And he added, that they sometimes found the Loadstone as easily fusible as other Iron-Oar.

A Gentleman very well experienc'd in the knowledge & management of Tin Mines, inform'd me, that in those of Devonshire or Cornwall a Vein of good Tin-Oar will<sup>111</sup> sometimes break off, as it were abruptly, & seem to degenerate into that<sup>112</sup> useless & offensive Mineral they call *Horn-stone*, or perhaps into a Vein of Marcasites; & that nevertheless, by following the *Ductus* of the Vein till one have got beyond the unprofitable Mineral,<sup>113</sup> they do (not very unfrequently) find again<sup>114</sup> good Tin, wherein the further Part of the Vein abounds.

I found upon tryal that finely powder'd Bloodstone would in dephlegm'd spirit of salt afford a solution of a fair yellow but somewhat reddish colour.

To make it probable that the Bloodstone vulgarly sold in our shops, (for I will not now dispute whether it be the true *Lapis Hæmatites*, or some kind of *Schistos*;) abounds with Particles that are diverse of them of a metallin nature, or of affinity to metalls; I dissolv'd some of it, in stronge spirit of salt, for I found that menstruum able to make a solution, or at least an Extraction of it. And to manifest this substance, to which the stone owes most of it's medical vertues; I pour'd to this high colour'd solution a little running Mercury, and shake them a little together, whereby there was presently a Præcipitation of a substance copious enough that cover'd the Mercury, but was quickly separable from it, by the stronge expressing the mixture thorough a peice of fine Leather. /p. 227/

We took a Red Earth, which by a very skilfull man was bought at a Drugsters for good Bole-armonick, and having put upon it Aqua fortis (made of Vitriol and Salt Peter) we kept it for some time in digestion, and found as we expected that it acquir'd a Reddish Colour, and seem'd to be copiously enough impregnated with the tinging Particles of the Bole. And the remaining Earth appear'd much depriv'd of it's Colour, being grown whitish.

108 Preceded by 'no' deleted and altered from 'pleasant'; followed by 'thing' deleted.

109 Followed by 'An' deleted. The inserted words, 'if you please', in the previous line are in Greg's hand.

110 Hand: Greg, as far as 'the Vein abounds'.

111 Followed by 'of' deleted.

112 Altered from 'what'.

113 Followed by 'tis so' deleted.

114 Followed by 'the sam' deleted. Boyle's informant in this passage is possibly the mine-owner Sir William Strode (1614–76) of Newnham, Devon.

With a not unlike success, I try'd a certain Red Bole sent me out of New England.

<sup>115</sup>An Intelligent Gentleman that liv'd many years in the East-Indies, & made Tryal to his Contentment of the Seed called *Dutroa*, answer'd me that the Dose is about 24 gr. in weight & that it may be given in Broth, Wine &c. after it has been infus'd therein for a competent time, & in such a dose it usually begins to work in about half an hour or an hour. To make the Operation cease before its time, he<sup>116</sup> prescribes besides the known use of Cold Water, to give a stroke upon the Patients Breast or some other part of his Body, brisk enough to make a vigorous excitation of the Spirit's, whereby he may speedily be brought to himself again, but without remembering what he did whilst Distemper'd.

The same person told me that he<sup>117</sup> bought at severall times three great Serpents, whereof the lest exceeded 20 foot in length, & the largest 22 foot. They were alive when he bought them, & to his wonder each of them was coyl'd up like a Cable in a Vessel that was not 3 foot over; thô being ask'd by me of what thickness they were, he answer'd me by showing me his thigh, as he bought them chiefly for the Stones he hop'd to find in their Heads, & for the Oyl (which is said to be of wonderfull vertue) that may be made of their Fat) he kill'd them for those Purposes, but found no Stone in any of their Heads, but<sup>118</sup>

<sup>119</sup>Mr R: the jeweller answerd me<sup>120</sup> that when he rubs two Diamonds together to grinde them into some shape he finds after a while that their mutuall attrition doth so heat them that he is scarce able to apply one of them to check without scorching it.

The same person told me that he found some white Saphers to be much more hard then other Saphers in so much that thô the<sup>121</sup> eye discover'd it not, the mill made him judge it <much> harder and of an intricate Texture as a knote /p. 228/ in<sup>122</sup> a branch is different from the rest <of the> wood. These hard and intractable stones he says were as he belives coagulated in water.

An intelligent person that visited the Indian mins of Diamonds, and negotiated for some 100000 thousands of crownes <in> that sort of Jems assur'd me that he saw a pretty large stone of good value that was affirm'd to be a Diamond and yet had half of it of a Red colour<sup>123</sup> And when I ask'd him what he himself thought of this strang stone, he answerd me that according to the best of his skil he judg'd it a true Diamond.

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115 Hand: Greg, as far as 'their Heads, but'.

116 Followed by 'gives' deleted.

117 Followed by three undecipherable words deleted.

118 Followed by a gap of approximately 3 lines.

119 Hand: uncertain, as far as 'a true Diamond'.

120 Followed by 'but' deleted. 'Mr R.' has not been identified.

121 Followed by 'T' deleted.

122 Followed by 'a piece of w' deleted.

123 Followed by 'A' deleted.

The Ingenious consul of Smyrna Mr. Rycaut answered me, that he had observ'd five Earthquaks at Smyrna in one yeare.<sup>124</sup>

<sup>125</sup>The violence of the Tempest continuing, there fell three Thunderbolts unto the Ship. The first fell upon the Boltspirit, and split it quite in two; and runing along upon the Deck kill'd three Men. The second fell two hours after, and killd two Men, shooting along as the other did from Head to Stern. The third followed presently after, the Master, the Masters mate, and myself standing together near the main mask [sic]. At what time the Cook coming to ask the Master whether he should take up the Victuals, the Thunderbolt took him in the lower part of his Belly, made a little hole, and took off all the hair, as clean as they dress a Pig with hot water, and Rosin, without doing him any more harm. Only when they came to anoint the little hole with Oyl of Coco's, he roar'd out through the sharpnes of the pain which he endur'd.

<sup>126</sup>An ingenious Chirurgeon that spent divers years among the Islands of the South Sea, answer'd me that he had seen severall Tryals made of the famous Poyson of *Macassar*, & that the way the natives use to examine whether it be good in its kind, is, to prick some condemn'd person in the foot with the head of an arrow dip'd in this Poyson, & then to cause an amputation to be made by a man that stands by ready with his Instruments for that purpose, & in case the party recovers or does not dye very speedily they conclude the Poyson not to have been well prepar'd, for when it has been so the Venom gains the Mass of Blood so suddenly that no quickness of Amputation can prevent it. He further answer'd me that in about 12 hours those that are kill'd with this Poyson have all their Bodyes as it were Gangrenated, which yet he imputes in good part to the heat of the Climate. /p. 229/

#### Memoirs and Paralipomena, the 2<sup>d</sup> Tome

<sup>127</sup>That Staticks may be apply'd on severall<sup>128</sup> occasions on which few would suspect them to be fit to be employ'd is a truth, of which having elsewhere given instances I shall now add but this one, that there may be a kind of *Staticke Geography* comparative or if you take a larg Map «(of Europe for example)» well chosen amongst severall others, for having<sup>129</sup> its paper of the most uniforme thicknes and with a good pair of sissors carefully cut it according to the

124 Sir Paul Rycaut (1629–1700), consul at Smyrna in 1667. He is quoted in Workdiary 36, but not on this point.

125 Marginal endorsement: 'Taverniers Voyages Part II Book I Cap. xvii' (hand: Greg). Hand of text: Bacon.

126 Hand: Greg, as far as 'heat of the Climate'. The last two lines are squeezed in at the bottom of the page.

127 Marginal endorsement: 'Tb'd'. Entry crossed through in pencil. Hand: Bacon, including heading.

128 Followed by 'subj' deleted.

129 Followed by 'the' deleted.



Ductices of the prick lines that divide the Kingdoms or<sup>130</sup> other Regions from one another, you may by<sup>131</sup> weighing these separately in a tender Ballance and comparing their respective weights with one another, the Assistant will make an Estimate tolerably near, thô not exact; of their different proportions in point of greatnes or extent, and by the same Method you may by help of a good paire of Scales make a better guess, then for ought I know, hath bin made hitherto of the Extent of the Sea in reference to the dry Land, and so determine that considerable Question, and on Cosmographers & Philosophers.<sup>132</sup>

<sup>133</sup>To dissolve crude Tin as clear & as well as purify'd [aqua fortis] is wont to dissolve sooner, my M[enstruu]m is thus made, take 2 parts of [aqua fortis] and one part of Spirit of Salt mixe<sup>134</sup> them well together, & in this M[enstruu]m dissolve small flated peices (for they need not be so small as fylings) of good Block Tin having a care, not to put in too much at a time, least the great Effer Vessels [i.e. effervescence] that wilbe excited should either break the glass, or make the Liquor run over.

<sup>135</sup>To reduce Tin Oar into Metal, we first beat it to very fine powder, & when 'tis sifted, we wash off the Earthy & lighter Parts in a Moulter [i.e. mortar], or some other convenient vessell, then having dry'd the metaline corpuscles very well, we mix them diligently<sup>136</sup> if the mettall be of very easy fusion, with 2 parts of our white nitro-tartareous flux powder in a strong & cover'd crucible /p. 230/ we keep<sup>137</sup> the mixture in good fusion for about 3 houres, or if the Oar be rich & tractable for 2 houres,<sup>138</sup> at the end of which time, the Metaline & malleable Regulus usually settles to the bottom of the Crucible, which for the most part cannot be got clean out, without breaking the Vessell.

<sup>139</sup>Sometimes an equall weight of sandiver very well mixt with oar, and proceded with as above, may be successively imploy'd to the same purpose, and

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130 Altered from 'of'.

131 Followed by 'com' deleted.

132 A related but not identical passage appears in Workdiary 40. Followed by two lines blank. The words 'a good paire of Scales' and 'Extent of the Sea in reference to the dry Land' are written in Boyle's hand, the former with a wavy line filling the remainder of a larger space left vacant for addition.

133 Marginal endorsement: 'Tb'd'. Entry crossed through in pencil. In the following sentence, the second occurrence of the symbol for aqua fortis and the words 'Spirit of Salt' are in Boyle's hand, again with a wavy line filling the extra space. There is a 2-line gap following this entry.

134 Altered from 'mixt'.

135 Marginal endorsement: 'Tb'd'. Entry crossed through in pencil, as is the next.

136 Followed by 'three' deleted.

137 Altered from 'kep'.

138 Followed by 'then' deleted.

139 Marginal endorsement: 'Tb'd'. Entry crossed through. The word 'sandiver' is in Boyle's hand, with a wavy line filling the spare space. The heading 'Memoirs & Paralipomena the 2d Tome' is written at the top of p. 230 as a running head. There is a blank line after this entry.



that now & then, even when the Oar is stubborn, provided the Fire be made stronger.

It may deserve the consideration of Jewelers that Cats Eyes, as ~~they~~<sup>140</sup> are vulgarly call'd or [sic] often found growing in the ~~same~~ mynes with Diamond wherein scarce any other sort of precious stones<sup>141</sup> have been met with for I have seen<sup>142</sup> several of them that were taken up in the Diamond Mynes by the Person that show'd them me, and who found there no other stones of any value.

<sup>143</sup>A very intelligent Person that had more frequented the Diamond Mynes ~~especially those of Colchonda~~ than any I have met with who laid out for others & himself vast summes of money upon that sort of precious stones, answer'd me, that he rarely found them in any other, then a Reddish sort of Earth almost like a Bolus, wherein they usually lay loose & single, so that he related unto me as a wonder, that He saw one that seem'd to, or out of another stone, that was opacous and of a pretty bignes, and of a kind much ignobler then Gems, and He told me, that for the rarity sake, he endeavour'd to purchase this Diamond, whilst he was cheapning it, another that was also greedy of it, bidding more then was expected, prevented him, and carry it away.<sup>144</sup>

The same Experienced Gentleman answer'd me, that the Diamonds was usually found not very far from the Surface of the ground. ~~That~~<sup>145</sup> all Diamonds are not of the same hardnes, tho they come from the same myne. And that those were very skilfull, and He himself would guess at the hardnes of Diamonds /p. 231/ before they came to try them by the Mill.<sup>146</sup>

<sup>147</sup>He likewise told me, that having read my little Tract of the Origine & Vertues of Gemms, I gave him the Curiosity, as well as he had the oppurtunity to examin my Conjecture *that Diamonds consists ~~or are made~~ of little plates*<sup>148</sup> lying upon one another, & that by the consideration of many rough Diamonds, He was induc'd to embrace the same Opinion.<sup>149</sup>

And when I told him, that I suspected Diamonds to be somewhat of a Martiall nature, & to have had some Particles of that kind, mixt with them in their first Coagulation (if you please) Formation, He told me that he remembred on this occasion, that the abovemention'd Stone, wherein he saw a Diamond growing, seem to be a kind of Iron Oar, to which I add, that the<sup>150</sup> red Earth in which those Gemms are usually found, may probably, in my

140 Replacing 'they will be' deleted.

141 Followed by 'and' deleted.

142 Followed by 'many' deleted.

143 Marginal endorsement: 'Tb'd'. Entry crossed through in pencil, as is the next.

144 Followed by 'He' deleted.

145 Replacing 'But' deleted.

146 Followed by 'H' deleted.

147 Marginal endorsement: 'Tb'd'. Entry crossed through in pencil, as is the next. The heading 'Memoirs & Paralipomena the 2d Tome' is written at the top of p. 231 as a running head.

148 Followed by 'mad' deleted.

149 Followed by 'A' deleted.

150 Followed by 'Bole or' deleted. There is a blank line following this paragraph.

opinion be of a marshall nature, then I have found, divers red Earths as Bol-Armon. and English Bole, and another Bole, which was sent me out of America, to be impregnated with Particles, or I concluded to be of an Iron or «a» Chalybeat Nature, on which I could separate from the rest of the Earth.

<sup>151</sup>To confirme with I have «in the [space left blank] Observation and» elsewhere deliver'd about the latent motion of parts that may be in a Body, not only quiescent, but solid, I shall here add, a strang instance which was afforded me by a Diamond, belonging to an Ingenious merchant of that sort of Gemms brought many fine ones out of the East Indies. For having at the Diamond myne it self, purchas'd amongst other stones that grew there, a<sup>152</sup> rough Diamond that he valued at about a hundred pound, & had well consider'd when he bought it, coming to look<sup>153</sup> over his purchase again once more about 10. dayes or a fortnight after, He much surpriz'd to find to his great loss, that this Diamond had of it self, crack't in several places. and so became of little or no value, but as 'twas a Rarity, and indeed I could not without<sup>154</sup> wonder, see soe fair & hard a stone, so oddly spoild with clefts, that seem'd to penetrate so very deep, that 'twas guess, twill not be very difficult to pull the parts of the Stone asunder and on this occasion He told me, that he had<sup>155</sup> admird this Accident at first, much more, then he did afterwards. /p. 232/ For complaining of it to divers Merchants & Jewellers that he met with in those parts, He was told that «thô it seldom happen yet» twas no such wonderful Accident, The like misfortune having befallne others as well as him.

<sup>156</sup>An Intelligent Person that hath bin in the Island of Sumatra where a Golden Myne hath bin discover'd and is now working assures me, that they divers times meet there with great grains, or rather Lumps of Gold form'd by nature, which thô they appear to be totally of solid metall, yet are divers of them hollow within, and contain a pretty quantity (some more some less) of a Substance which he judg'd to be «portions» the common Earth of that place, And when I ask'd him whether this Earth might not have got into these Cavities at some unheated hole, in the forme of a dirty Liquor or Mud, He answer'd me, that having attentively consider'd of some of them, He found that the Gold did on all sides perfectly inclose the included Earth. He sayes, that some of these Golden Lumps weigh'd about an [ounce] apeice, but others much more. On this occasion I consider'd whether<sup>157</sup> this odd Phænomenon may be probably solv'd

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151 Marginal endorsement: "Tb'd". Entry crossed through in pencil. The heading 'Memoirs & Paralipomena the 2d Tome' is written at the top of p. 232 as a running head. Before 'Observation' there is a space in the text.

152 Altered from 'ar of'.

153 Followed by 'upon' deleted.

154 Followed by 'so' deleted. The next word, 'wonder' is followed by 'to' deleted.

155 Followed by 'm' deleted.

156 Marginal endorsement: "Tb'd". Entry crossed through in pencil.

157 Followed by 'it might be conceav'd that the metall did have [?] a Liquid, & as it were a Mercurial Forme' deleted.

by supposing the Earth to have bin encompass'd by the Gold, whilst it<sup>158</sup> was in a Mercurial Forme, or in solutis principiis, as they speak, after which<sup>159</sup> the quiet stay & rest in the Cavity, it became to be coagulated, but thô I could say somewhat to countenance this whimsey, «yet»<sup>160</sup> I forbore to do it. I gues'd «twas»<sup>161</sup> from this Myne, that I receiv'd as a present from an unknown Person residing in the Indies, a piece of Oar, wherein the Gold seems to be protuberant & so rich «& so near perfection» as to be little less then a ruddy malleable.

To make the best sort of «dry» tests (or dry Cuples «as some call them») equal parts of Sturbridge clay well calcin'd and venetian Talc these being separately & very finely powder'd, must be exactly mingled & the mixture «brought to»<sup>162</sup> a due consistence with quick lime water.<sup>163</sup>

To make a mixture for lining Furnaces «for fusion» and luteing on the covers of crucible, and for other purposes<sup>164</sup> to which very strong Fires are requisite, take 2 parts of Sturbridg Clay (or some other as good) wel burnt, wash'd & dry'd, and one part either of<sup>165</sup> Bone-ashes, sand, or Glasse reduce them separatly to fine powder, then mingle them exactly, and bring them to a fit consistence with Quick Lime water.<sup>166</sup> Of this matter you may also make larg dryd Tests & Muffles to, but they must be wel bak'd in a Potters Oven.<sup>167</sup>/p. 249/

#### Memoirs and Paralipomena the 2<sup>d</sup> Tome

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It may serve to illustrate the «quick» passage of Corpuscles out of one visible Fluid into another, thô these fluids be of such heterogenious natures, as not to mingle (permanently) even by agitation, if I relate, what I lately show'd to some curious Persons, I tooke two Liquors, whereof one was deeply colour'd of a reddish brown «the other»<sup>168</sup> which was greater in quantity was altogether coulourles, these two Liquors swum upon one another in a glass vyal without mingling. But when I shap'd them together, that by being confounded, more of their parts might come to touch one another, they quickly settled againe as

158 Followed by 'is' deleted.

159 Followed by 'vi' deleted.

160 Replacing 'that' deleted.

161 Replacing 'that' deleted.

162 Replacing 'made up into' deleted.

163 'venetian Talc' is in Boyle's hand, as is 'Bone-ashes, sand, or Glasse' in the following paragraph.

164 Followed by 'where' deleted; after 'to which', 'a' is deleted.

165 Followed by 'or' deleted.

166 Followed by 'Then press «the mass» [replacing 'them' deleted] it very hard in your moules do give it the d' deleted.

167 At this point, the following items occur: p. 233 is a copy of the first complete entry on p. 229; p. 235 is a copy of the first complete entry on p. 232, except that here it speaks of a 'Minerall Forme' instead of a 'Mercuriall Forme'; p. 237 is a copy of the second complete entry on p. 230. For the content of pp. 239–47, see headnote.

168 Replacing 'the other was altogether colourles,' deleted.



distinct as they were at first each keeping it self with in its own superficies but<sup>169</sup> by this agitation the uppermost Liquor appear'd to have in a trice to have gain'd all the tincture that was before in the undermost, which now look'd colourles like common water.

To manifest<sup>170</sup> or confirme that by change of Texture <such> particular Salts as one would not expect, may be produc'd I caus'd my Laborant to make, the following Experiment. There was taken ordinary Gunpowder, and being warily rub'd to dust it was made up into small Pellets, or other such masses, with common water, that it might both acquire a fit consistence, and allow the Artist time to doe, what was requisite to be done, before explosion. Then this thus moisten'd powder was cast by degrees, into an Earthen long neck or Retort perforated in the upper part that<sup>171</sup> that the matter may be cast in, by small portions, and the hole<sup>172</sup> may be nimble closed with a stopple of good clay, or some other fit matter before the wet powder could <take><sup>173</sup> fire thô this Earthen vessel was fitted with a Receiver (which ought to be capacious) yet they were so loosely join'd together that there was no great danger, the going off of so little Gunpowder as was cast in at once, could break either of the vessels, soon <any of><sup>174</sup> the portions of Gunpowder was cast in, would blow up and yeild<sup>175</sup> a flash together with a great deal of smoak, that would pass into the Receiver, and when the smoke emitted the one portion came to be somewhat lessen'd, an<sup>176</sup> other parcell of Gunpowder was throwne in and so another, till the whole was employ'd. This done the clear Liquor, that came over into the Receiver was pour'd off whereas Saltpeter which <is><sup>177</sup> by far the most copious Ingredient of Gunpowder yeilds a powerfully acid spirit as appeares in [aqua fortis] and Brimstone also, when tis brought to an actual flame, affords a highly acid Liquor, as we see by the preparation of what they call Oleum Sulphuris per Campanam, and Charcole, which is the only remaining Ingredient of Gunpowder yeilds in distillations /p. 250/ as far as I try'd no spirit at all, and as tis yet of a wooden nature or to yeild<sup>178</sup> an acid spirit, whereas I say these things are, and wheras consequently one would expect, that the spiritous Liquor, afforded by these 3 Ingredients should be highly acid, I was of opinion that the operation of the fire and of the Air, would change the<sup>179</sup> ascending Corpuscles

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169 Followed by 'the uppermost' deleted.

170 Followed by 'the' deleted.

171 Followed by 'a small portion of' deleted.

172 Altered from 'whole'.

173 Replacing 'be' deleted and 'fire' altered from 'fire'd'.

174 Replacing 'after' deleted.

175 Altered from 'yeilding'.

176 Altered from 'and'.

177 Replacing 'makes' deleted; 'by' altered in composition. Two words later, 'the' is followed by 'gre' deleted.

178 Followed by 'it that the' deleted.

179 Altered from 'these'.



into a Liquor of another nature. And accordingly I found the Spirit of Gunpowder, to be, not Acid, but of a nature resembling that of hartshorn or urine, For it would make an Ebullition with stronge Acids.<sup>180</sup> And it would not only readily turne Syrup of Violets green, but would precipitate the solution of ordinary Sublimate of a ~~very~~<sup>181</sup> white colour.

To show that the Intestine agitation and justling of the parts even of vegetable bodies<sup>182</sup> antecedently to any violent operation of the fire, so alter the texture as that instead of the acid spirits it would afford before, it will yeild by the same way of destillation spirits of an urinous or<sup>183</sup> (as many modern Chymists would speak) alcalizate nature, we tooke ordinary Peas, and having distil'd them before Winter we obtain'd as is usuall an acid spirit ~~mixt~~<sup>184</sup> with such a one as I have elsewhere style<sup>185</sup> unanimous as most vegetables destil'd in Retort are wont to afford, having again caus'd the like Peas to be distild some weeks after, they still afforded an acid spirit like the former, as appear'd by tryal purposely made. But<sup>186</sup> some months after having distil'd the same sort of grains, obtaine, as ~~I~~<sup>187</sup> expected, a spirit that by it's smell, and it's operation upon syrup of violets (which it turn green, and upon a solution which it turn white, manifested it self to be of an alchalizate nature, and of affinity as to divers considerable qualities ~~to~~<sup>188</sup> spirit of hartshorn, urine blood, and other Animal substances, and other substances belonging to the Animal kingdom.<sup>189</sup> But here I /p. 251/ must not omit to take notice of an odd variation that I observ'd in<sup>190</sup> repeating the foregoing Experiment for one year,<sup>191</sup> thinking fit to try whether by keeping<sup>192</sup> Peas beyond the time at which I use to begin to obtain volatile Salt from them, they would yeild more of it, or else decay, or degenerate, or in a word pass into some new state, I caus'd a quantity of Peas, that I had long kept for such tryals to be distil'd in<sup>193</sup> or about the month of February but had instead of a Liquor, resembling spirit of urine or of hartshorne a reddish Liquor that in smel & tast did much more resemble spirit of Tartar, or som other vegetable that affords an Acid & anonymous Spirit

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180 Followed by a space of five words' length. The following sentence is followed by a space of two lines.

181 Replacing 'milke' deleted.

182 Followed by 'without the violent' deleted. The next word but one, 'to' is followed by 'the' deleted.

183 Followed by 'of' deleted.

184 Replacing 'together' deleted.

185 Altered from 'styld'. The next word, 'unanimous', was altered in composition.

186 Followed by 'kee' deleted.

187 Replacing 'we' deleted [?].

188 Replacing 'the' deleted.

189 Followed by a space of three words' length.

190 Followed by 'making the' deleted.

191 Followed by 'being well' deleted.

192 Followed by 'these' deleted. Four words later, 'time' is followed by 'th' deleted.

193 Followed by 'February' deleted.

mingled together, and the like Liquor I obtain'd from another pound<sup>194</sup> of the same parcel of Peas committed to distillation towards<sup>195</sup> the latter end of March. And having not many dayes after, caus'd to be distil'd some *«maiz»*<sup>196</sup> (which many call Turkey wheat)<sup>197</sup> brought *«me»* from New England, I had<sup>198</sup> a red Liquor that seem'd to have nothing of a volatile Alcaly but resembled taste & smell the spirit of Peas last mention'd. So that if there was not some peculiarity in the peas we made our tryals with it seems that the volatile alcalizate salt is produc'd in that sort of Pulse between such & such a time of the<sup>199</sup> age of Peas, after which as wel as before, that sort of Pulse we yeild'd by distillation; or rather *«of»* an Acid *«then of»*<sup>200</sup> an Alcalizate nature, but this Experiment to be fit to be relyed on, or to be tryed *«upon»*<sup>201</sup> several sort of Peas and different seasons, as wel as yeares, for thô what hath bin<sup>202</sup> recited in the former part of this Relation, is sufficient to warrant the inference I made from it, yet the tryal may wel deserve to be repeated for other purposes, it may perhaps afford the useful hints, about the most & the lest fit seasons for gathering vegetables according to the differing<sup>203</sup> uses design'd to be made of them *«wheither»* by the Physitian or the Chymist.

<sup>204</sup>The King having done me the Honour to discourse with me this Afternoon about the Northern Seas, of which he receiv'd a while since from Capt Wood, whom he sent thither purposely to make Discoveries,<sup>205</sup> his Majesty told me among other memorable things /p. 252/ that the Sea not far from Nova Zembla was found so very Salt that it appear'd wonderfull, insomuch that the Ship was on that account buoy'd up about three fingers breadth or Inches above the Mark (for I remember not the Seamens Term of Art)<sup>206</sup> to which *«the Water»* us'd to reach when the Ship sail'd in other Seas. Of which great Saltness one Cause was suppos'd to be, that much of the Fresh Water was by the excessive Cold Condens'd into Ice (which does indeed consist almost totally of Fresh Water Congeal'd) of which (on that Occasion)<sup>207</sup>

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194 Followed by a space of two words' length.

195 Altered from 'abo[ut]'.

196 Replacing 'maize', altered in composition and deleted.

197 Followed by 'which was presented me by an Inquisitive Gentleman negl [?]' deleted.

198 Followed by 'as fro' deleted.

199 Altered from 'their'. Two words later, 'of' is followed by 'that graine' deleted.

200 Replacing 'of' deleted.

201 Replacing 'in' deleted.

202 Followed by 'above' deleted.

203 Followed by 'purpo' deleted.

204 Hand: Greg, as far as 'sixty fathome deep'.

205 John Wood (d. 1681), naval captain and FRS. See E.G.R. Taylor, *The Mathematical Practitioners of Tudor and Stuart England, 1485–1714* (Cambridge, 1954), pp. 261–2. The King referred to is Charles II.

206 Followed by 'by' deleted. The insertion that follows two words later replaces 'altho' [?] deleted.

207 Altered from '(, and )' deleted after 'added'. Three words later, 'that' followed by 'the' deleted.

he added that they had met with in those Seas of fourscore fathom of thickness.

What other Causes may be of the Saltness of some Seas I elsewhere offer a Conjecture.

His Majesty at the same time was pleas'd to tell me that in those Seas the Water was found so very Clear that divers Objects, as particularly Stones, could be seen at the bottom when the Sea was no less, & sometimes more, than sixty fathome deep. His Royall Highnes speaking of the same thing to me,<sup>208</sup> mention'd the depth of the water, at whose bottom, objects may be seen to be about 70 fathom.

To show how much the fusiblenes of «mineral» Bodies is promoted by Texture. I shall add this Experiment (purposely made) we took of Lead & Tin equal parts, and having melted them together, we put to them, as much Bismuth<sup>209</sup> as they both together weigh'd, & then pour'd them out into a slender Ingot, by which means we obtain'd a brittle mixture, that was so fusible, that being held in a flame of Candle, it «would»<sup>210</sup> melt & drop down like sealing wax.

Mr M<sup>211</sup> who liv'd so many years in the Islands of the South Sea, assur'd me that he had many times seen in dark nights; plain luminous tracts, that were made by the brisk motion of great Fishes swimming not at the top, but a good way underneath the Surface of the Sea.

<sup>212</sup>Wee put some quicksilver into a smal «wide»<sup>213</sup> mouth'd Glass and from the Cork with which we stopt'd it we suspended a peice of thinly foliated Gold<sup>214</sup> as Horizontly as conveniently as we could so that the Metal did not touch the Mercury but hung at<sup>215</sup> a quater of «an inch» or better above it. But thô the Glass was left in a south window for divers weeks, yet the suspended Gold did not appear to be at all whitened by<sup>216</sup> any fumes that many would expect should ascend from the Quicksilver.

A Jeweller to a crown'd head, answered me that not only he found some Diamonds much harder then others but in the same Diamond he found one part very much harder then another so that sometimes when he could scarce with all his skill work on the corner of «a»<sup>217</sup> Diamond the opposite would worke easily and to use his expression almost like chalk.

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208 The Duke of York, the future James II. From 'His Royall Highness' to 'Surface of the Sea' the text is in the hand of Bacon.

209 Followed by a space of two words' length.

210 Replacing an unsuccessful attempt to spell the word.

211 Followed by a space of two words' length.

212 Hand: unidentified (same as pp. 227–8), to end of text.

213 Replacing 'whid' deleted.

214 Followed by 'so' deleted.

215 Followed by 'not above' deleted.

216 Followed by 'the' deleted.

217 Replacing 'the' deleted. The jeweller has not been identified.

## Chapter 5

# The Making of Robert Boyle's *Free Enquiry into the Vulgarly Receiv'd Notion of Nature* (1686)

Michael Hunter and Edward B. Davis

### Introduction

Robert Boyle's *Free Enquiry into the Vulgarly Receiv'd Notion of Nature* (1686) is one of the key texts of the Scientific Revolution. In it, Boyle took issue with various views of the natural world, prevalent both in antiquity and in his own time, which saw nature as a wise, benevolent and essentially purposeful being. Associated with such views were commonplace expressions like 'Nature does nothing in vain', 'Nature abhors a vacuum' or 'Nature is the wisest physician'. Boyle argued that such conceptions were superfluous. In his view, natural phenomena could best be explained by seeing nature as an automaton, operating by mechanical processes under the ultimate control of an infinite, personal God. The *Free Enquiry* thus 'provided the theological and philosophical underpinnings for the corpuscular philosophy that lay at the heart of all of Boyle's work in natural philosophy', in the words of a modern scholar, Margaret Osler. Contemporaries, too, were aware of the work's significance, like the translator of the Latin edition of the work, Boyle's protégé, the Scottish physician and writer David Abercromby, who wrote, having summarised the book's argument: 'I therefore look upon this work as the new system of a new philosophy which fundamentally overthrows the foundation – namely, Nature – of all views hitherto held in philosophical matters.'<sup>1</sup>

In part, *A Free Enquiry* is important for laying out what Boyle saw as the superior intelligibility of mechanistic explanations of natural phenomena over

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1 Margaret Osler, 'The Intellectual Sources of Robert Boyle's Philosophy of Nature: Gassendi's Voluntarism and Boyle's Physico-theological Project', in Richard Kroll, Richard Ashcraft and Perez Zagorin (eds.), *Philosophy, Science and Religion in England 1640–1700* (Cambridge, 1992), pp. 178–98, on p. 187; D[avid] A[bercromby], 'Traductoris Praefatio' in R. Boyle, *De Ipsa Natura, sive Libera in Receptam Naturae Notionem Disquisitio ad Amicum* (London, 1687), sig. A4v, translated in *Works*, vol. 10, p. 575.



the more teleological and qualitative ones that he associated with the ‘vulgar’ conception of nature. In doing so, he drew on the programme of vindicating mechanistic explanations to be seen in connection with pneumatic phenomena in his *New Experiments Physico-Mechanical, Touching the Spring of the Air and its Effects* (1660), with hydrostatical ones in his *Hydrostatical Paradoxes* (1666) and with matter theory more generally in his *Certain Physiological Essays* (1661), his *Origin of Forms and Qualities* (1666) and other works. Equally important, as was argued particularly by J.E. McGuire in a classic study of 1972, is how indissolubly Boyle’s conception of nature is linked to his voluntarist theology. McGuire claimed that the fact that the conception of laws of nature is here ‘developed in its most complete form’ was closely related to Boyle’s view that God’s will ‘is the only causally efficacious agency in nature’, a view refined by later scholars to state that, insofar as natural bodies can be said to possess causal powers which help to sustain the order of the universe, this was through ‘the continued assistance of God’.<sup>2</sup> Boyle’s objection to the vulgar notion of nature (and to any conception of the natural world which had similar implications) was that they attributed to ‘nature’ powers and activities that properly belonged to God alone. He thus saw his enterprise as playing an important role in Christian apologetic as well as in natural philosophy.

As a statement of the broad philosophical implications of the mechanical philosophy by one of its leading advocates, *A Free Enquiry* has attracted attention and provoked controversy ever since it came out. In the aftermath of its publication, such figures as John Ray and G.W. Leibniz were stimulated to clarify their own philosophies of nature in reaction to it.<sup>3</sup> More recently, a number of modern scholars have analysed Boyle’s ideas and endeavoured to elucidate the philosophical traditions from which he sought to distance himself. Thus both J.E. McGuire and Keith Hutchison have contextualised the work in

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2 J.E. McGuire, ‘Boyle’s Conception of Nature’, *Journal of the History of Ideas*, 33 (1972), 523–42, esp. p. 525; Timothy Shanahan, ‘God and Nature in the Thought of Robert Boyle’, *Journal of the History of Philosophy*, 26 (1988), 547–69, on p. 567.

3 See John Ray, *The Wisdom of God Made Manifest in the Works of the Creation* (London, 1691), pp. 32–3 (see also the extended version in the fourth edition, London, 1704, pp. 53–7, quoted and discussed in R.S. Westfall, *Science and Religion in Seventeenth-century England* (New Haven, Conn., 1958), pp. 94–5); Catherine Wilson, ‘De Ipsa Natura: Sources of Leibniz’s Doctrines of Force, Activity and Natural Law’, *Studia Leibnitiana*, 19 (1987), 148–72; Guido Giglioni, ‘Automata Compared: Boyle, Leibniz and the Debate on the Notion of Life and Mind’, *British Journal for the History of Philosophy*, 3 (1995), 249–78. For J.C. Sturm’s description of the book on receipt of the copy sent him by Boyle as ‘opusculo ... aureo’, see Sturm to Boyle, 1 March 1688, *Correspondence*, vol. 6, p. 247. For a text comprising what appear to be the critical remarks on the book of an anonymous French Aristotelian, see ‘Annotationes in Aristotelicam naturae definitionem’, BP 44, fols. 51–4. Unfortunately, ‘a Curious Philosoph[ical] Letter’ from the Durham virtuoso Peter Nelson, ‘proposing some Objections to Mr B[oyle] about his Treatise on the Vulgar Notion of Nature’, though included in a list of Boyle letters made in the early eighteenth century by Henry Miles (BP 36, fol. 145), no longer survives.

terms of the voluntarist theologies which came to the fore in the aftermath of the Reformation, distinguishing the position adopted by Boyle in the work from many of the leading philosophical traditions of his day – Aristotelian, Helmontian and neo-Platonist.<sup>4</sup> An alternative reading of Boyle's polemical motives in *A Free Enquiry* has been developed in an influential series of studies by J.R. Jacob, who has argued that the work is aimed against an elusive tradition of 'pagan naturalism' linked to politically subversive tendencies in Restoration England.<sup>5</sup> More recent studies have not, however, tended to uphold Jacob's views, the evidential basis of which will be considered further below, under 'Boyle's Preoccupations and Antagonists'; instead, the current consensus tends to see Boyle as attacking 'a wide range of naturalisms' in this work.<sup>6</sup>

By way of reconstructing the history of the book, such authors have often quoted Boyle's comments in his preface, dated 29 September 1682 (i.e., three and a half years prior to the book's actual publication); Boyle's remarks have also been cited to illustrate the chaotic nature of his mode of composition more generally.<sup>7</sup> Boyle there explains how 'the following Discourse was written about the Year 1666. (that is, some Lustres ago,)' and that he addressed his thoughts to 'a good Christian' 'under the Name of *Eleutherius*'. He continued:

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- 4 McGuire, 'Boyle's Conception of Nature'; Keith Hutchison, 'Supernaturalism and the Mechanical Philosophy', *History of Science*, 21 (1983), 297–333. See also E.M. Klaaren, *Religious Origins of Modern Science: Belief in Creation in Seventeenth-century Thought* (Grand Rapids, Mich., 1977), esp. ch. 6; Westfall, *Science and Religion in Seventeenth-century England*, pp. 83–9; M.A. Stewart (ed.), *Selected Philosophical Papers of Robert Boyle* (Manchester, 1979), p. xxii, with substantial extracts printed as pp. 176–91. Oddly, the work was overlooked by R.G. Collingwood in his important book *The Idea of Nature* (Oxford, 1945). See also e.g. L.J. Rather, 'Pathology at Mid-Century: A Reassessment of Thomas Willis and Thomas Sydenham', in A.G. Debus (ed.), *Medicine in Seventeenth-century England* (Berkeley and Los Angeles, 1964), pp. 71–112, at pp. 89ff.; G.B. Deason, 'Reformation Theology and the Mechanistic Conception of Nature', in R.L. Numbers and D.C. Lindberg (eds.), *God and Nature* (Berkeley and Los Angeles, 1987), pp. 167–91, at pp. 180–1. Other recent studies include Osler, 'Intellectual Sources', esp. pp. 186–7; E.F. Keller, 'Secrets of God, Nature, and Life', *History of the Human Sciences*, 3 (1992), 229–42; B.B. Kaplan, 'Divulging of Useful Truths in Physick': *The Medical Agenda of Robert Boyle* (Baltimore, 1993), pp. 71–5, 122–6; R.-M. Sargent, *The Diffident Naturalist: Robert Boyle and the Philosophy of Experiment* (Chicago, 1995), pp. 93ff.
- 5 J.R. Jacob, *Robert Boyle and the English Revolution* (New York, 1977), pp. 159ff.; id., 'Robert Boyle and Subversive Religion in the Early Restoration', *Albion*, 6 (1974), 275–93; id., 'Boyle's Atomism and the Restoration Assault on Pagan Naturalism', *Social Studies of Science*, 8 (1978), 211–33; id., *Henry Stubbe, Radical Protestantism and the Early Enlightenment* (Cambridge, 1983), pp. 56–7, 143ff.
- 6 Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle and the Experimental Life* (Princeton, 1985), p. 202n. and pp. 201ff. passim. See also Nicholas Steneck, 'Greatrakes the Stroker: The Interpretations of Historians', *Isis*, 73 (1982), 161–77; Hutchison, 'Supernaturalism'.
- 7 By, for example, McGuire, 'Boyle's Conception of Nature', p. 528; Stewart, *Selected Philosophical Papers*, p. xxii; Jacob, 'Boyle's Atomism', p. 216; Steneck, 'Greatrakes the Stroker', pp. 171–2. For more general comments see J.T. Harwood, 'Science Writing and Writing Science: Boyle and Rhetorical Theory', in Michael Hunter (ed.), *Robert Boyle Reconsidered* (Cambridge, 1994), pp. 37–56, on pp. 42, 54 nn. 70, 74.

not long after, the Youth, to whom I dictated it, having been inveigled to steal away, unknown to me or his Parents, into the *Indies*, (whence we never heard of him since,) left the loose Sheets, wherein (and not in a Book) my thoughts had been committed to Paper, very incoherent, by the Omission of divers necessary Passages. Upon which Account, and my Unwillingness to take the Pains to supply what was wanting, those Papers lay by me many Years together neglected, and almost forgotten; 'till the Curiosity of some Philosophical Heads, that were pleas'd to think they deserv'd another Fate, oblig'd me to tack them together, and make up the Gaps that remain'd between their Parts, by retrieving, as well, as after so many Years, my bad Memory was able to do, the Thoughts I sometimes had, pertinent to those purposes.<sup>8</sup>

Elsewhere in his preface, Boyle reiterates how 'the Papers, that make up the following Treatise, were not written in one continued *Series* of Times, but many Years were interpos'd between the Writing of some of Them, and that of Those which precede and follow Them'; he describes 'in how *preposterous* an *Order* the Papers, I have here tack'd together, came to Hand; and how many Things are upon that score unduly plac'd', apologising for 'this Rhapsody, of my own loose Papers'. In his Conclusion he told Eleutherius how: 'You have the whole Bundle of those Papers that I found and tack'd together, (for they are not all that I have written)', excusing the fact that things appeared out of order on the grounds that 'several Parcels, that came first into my hands, having been laid and fasten'd together, (to keep them from being lost, as others had already been) before the others were lighted on', and blaming this on 'Haste and Sickness'. Indeed, he even apologised that the result was to be looked upon 'but as an *Apparatus* (towards a more full and orderly Treatise,)' rather than as a properly finished work.<sup>9</sup>

This, however, is virtually the sum of previous commentators' knowledge of the evolution of the text, the only other evidence cited by any of them being a letter of 9 March 1666 in which Boyle referred to 'what I once drew up by way of Disquisition about the receiv'd Notion of Nature (wherein perhaps I doe not acquiesce)'.<sup>10</sup> Earlier students of the work have thus been aware that it had a long period of gestation prior to its publication in 1686, and have speculated about what the effects of this might have been on its content. None of them realised, however, that further information about the making of the book was available from two sources, one bibliographical, the other manuscript. The latter is especially important, including as it does datable manuscripts of

8 *Works*, vol. 10, pp. 439–42, on p. 440–1.

9 *Ibid.*, pp. 440, 442, 569–70.

10 Boyle to Stubbe, 9 March 1666, *Correspondence*, vol. 3, p. 102 (cited as evidence that much of the book was written in 1665 in Jacob, 'Boyle's Atomism', p. 216 and n. 21). See further the section 'Boyle's Preoccupations and Antagonists', below. In addition, Steneck, 'Greatrakes the Stroker', p. 172n., cites Boyle's allusion to his *Origin of Forms and Qualities* in the work as a dating clue.



sections of the book, particularly passages dealing with medical arguments in favour of the purposefulness of nature. There are also other manuscript versions which were prepared but not published, most importantly a 'Postscript' distinguishing desirable from undesirable forms of atomism. This material make it possible to go much further than hitherto in differentiating exactly which sections Boyle added to the book during the revision that he carried out c. 1680, and the discussion of its component parts below will set out the evidence that exists on this question section by section, also commenting on the material that Boyle drafted but failed to publish. Then, the succeeding section, 'Boyle's Preoccupations and Antagonists', will utilise this evidence to comment on the threats by which Boyle was apparently engrossed both in the 1660s, when he initially wrote the work, and c.1680, when he revised it, thus anchoring him more firmly than hitherto in the intellectual context to which he belongs. First, however, it is appropriate to use the new material to reconsider Boyle's method of composition: as will become apparent, it is thus possible to throw new light on the topic in relation not only to this work but to Boyle's writings as a whole.

### **Boyle's Method of Composition**

Of the new data, the bibliographical may be considered first. Part of this is a single-leaf 'Advertisement' found in certain copies only of the published version of the book, which was hence unknown to Thomas Birch, who ignored it in his 1744 collected edition of Boyle and its 1772 reprint. The advertisement – which is bound in different places in such copies of the first edition as it appears in, and of which a manuscript version survives, quoted in full below – explains how 'a great Oversight' led to several accidental 'Transpositions of the loose Sheets, wherein (and not in a Book,) the Copy was sent to the Press'. The result was that whole sections of the text were misplaced, and the implications of this for the ordering of the book's argument will be assessed in the next section. It may incidentally be noted that it confirms Boyle's statements in the preface concerning the rather disparate materials from which the work was composed, a matter to which we will return shortly.

Secondly, evidence is available from a comparison between the English edition of the book and its Latin edition, announced by the publisher in December 1686 and published in 1687.<sup>11</sup> This translation was clearly authorised by Boyle, being executed by his protégé, Dr David Abercromby; it is preceded by a kind of promotional 'puff' for the book by Abercromby, a

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11 Edward Arber (ed.), *The Term Catalogues, 1668–1709* (3 vols., London, 1903–6), vol. 2, p. 179.



sentence from which has already been quoted.<sup>12</sup> What is significant about it is that a collation of it with the published English version reveals minor differences between the two, most of them involving the absence from the Latin text of – mainly fairly brief – passages that appear in the English.<sup>13</sup> The reason for this is evidently that the passages in question were added to the English text after the translator was given a copy to work from, as is shown by the fact that these passages also fail to appear in such manuscript versions of the relevant text as survive.<sup>14</sup> This shows that the two editions were prepared in parallel, the passages in question being added to the English edition at the very last moment; it thus confirms in extreme form the continuous process of accretion by which Boyle's books were produced.

As for manuscript evidence, this takes two forms. One source that has not previously been cited in this connection are the various lists of Boyle's unpublished writings among the Boyle Papers at the Royal Society, which provide certain key dating clues. These confirm that the work was indeed begun in the mid 1660s, as Boyle states in his preface. A list of Boyle's 'Various Tracts, as Essays &c.' dating from the mid 1660s includes the title 'An Examen of the Notion of Nature', while a further list, dated 19 November 1667 – which is certainly later than the undated one – gives it a title fairly similar to that under which it was to be published: 'A free Enquiry into the received notion of Nature'.<sup>15</sup> The work does not appear in 'A List of such papers, as were mentioned to me by the Honourable Robert Boyle March 26 1677' by Henry Oldenburg – conceivably because at the time when that list was compiled Boyle had not yet begun to take an interest in it again – and neither does it appear in 'A Catalogue of the Honourable Mr Boyles Writings unpublish'd taken the 7th of July 1684', perhaps because by that time it was deemed ready for the press.<sup>16</sup> Thereafter, it appears in one further inventory, of various papers in Boyle's rooms made on 17 September 1691, which includes the item: 'Another [cover] 4to &c Entitul'd Fragments relating to the Free Inquiry'.<sup>17</sup> This could easily represent the manuscript material relating to the work that still survives, which might well have been bundled together in Boyle's later years although it is now scattered through the archive.

12 On Abercromby, see E.B. Davis, 'The Anonymous Works of Robert Boyle and the *Reasons why a Protestant should not turn Papist* (1687)', *Journal of the History of Ideas*, 55 (1994), 611–29.

13 *De Ipsa Natura*, passim. These and other differences between the Latin and English editions are tabulated in *Works*, vol. 10, passim; they are also noted in the text of the work edited by the authors of this chapter and published in the series Cambridge Texts in the History of Philosophy (1996).

14 See below, 'The Treatise's Component Parts'.

15 BP 36, fols. 91, 177, published in *Works*, vol. 14, pp. 332–3. On the relationship of the former to a series of lists with which it overlaps, see *ibid.*, pp. xl–xli.

16 BP 36, fols. 59–60, 88–9, published in *Works*, vol. 14, pp. 337–9, 341–2.

17 BP 36, fols. 122–3, published in *Works*, vol. 14, p. 353. Note also Royal Society MS 189, fol. 47, which has a list of abbreviations including 'B a N' denoting 'the book about nature call'd the free Inquiry &c.'

Today, the Boyle Papers contain substantial quantities of manuscript material relating to the book, and all of this, whether relating to sections published in the book or to unpublished ones, is listed in the attached Table. This has been included here partly for its relevance to the argument of this chapter, but also as a specimen of a method of tabulating manuscript material in the Boyle archive, and its relationship to each of his published works, which is deployed throughout the 1999–2000 edition of *The Works of Robert Boyle* produced by the authors of this chapter. In it, the relevant manuscripts are shown in numerical order of the volume in which they survive in the archive. In successive columns, the Table then gives a brief description of the identity and nature of each document; where these overlap with the published text, it provides a cross-reference to the location of the passage in question in the first edition and in volume 10 of Boyle's *Works*; it identifies the hand in which each is written, and gives its approximate date.

In the next section of this chapter, the significance of the material will be assessed in relation to the structure of the treatise section by section. Here, however, it is necessary to comment on it in general, in the context of the conclusions that have recently been drawn about the nature and date of the components of the Boyle Papers as a whole. Until recently, scholars saw little hope of ever distinguishing different elements within the mass of material in the archive by date. Over the past decade, however, it has proved possible to date various of the handwritings that appear within it. From c. 1650 onwards, Boyle rarely wrote more than brief passages himself, instead relying on amanuenses to write out his words for him. The turnover of such scribes was relatively rapid, and the handwriting of amanuenses who worked for him at different stages can be identified by the survival of letters and other dated documents that they wrote, thus making it possible to identify 'strata' of material of varying dates within the archive. Among the handwritings that may be thus identified are some dating from the 1660s, some from c. 1680, and a further group, overlapping with the second, of scribes who continued to work for him till the end of his life; it is in hands of each of these groups that the manuscript material relating to the *Free Enquiry* is written.<sup>18</sup>

The fact that some of this material is in hands of the 1660s, and that it displays corrections made during the course of composition, confirms Boyle's statement in his preface that he began the book at that time.<sup>19</sup> Obviously it also proves that the section of text which survives in manuscripts written in these hands – namely section V, arguments 1–3 – must have been composed at that time. Moreover, since the part in question is numbered, the basic structure of the work, involving its division into numbered sections, must already have been present at that point, and at least part of the text that currently precedes it must

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<sup>18</sup> See above, pp. 46–57.

<sup>19</sup> BP 10, fols. 103–6.

already have existed. It seems a plausible hypothesis that at least some of the text which follows in the printed work also formed part of the 1660s version, though it is impossible to be sure how much, except that this cannot include sections of which (as we shall see) there survive manuscripts of later date that show evidence of composition in progress. Two copies of the section in question survive, BP 8, fols. 149–52 (see Plate 5), and BP 10, fols. 103–6, the former a fair copy of the latter. These are both in hands identifiable as dating from the 1660s, namely hand K and hand F, the latter interspersed with substantial additions and corrections in hand E: hands E and F are two of the commonest and most distinctive of the hands of scribes used by Boyle in the 1660s, while K is equally distinctive though less common. Since no dated specimens of these is found after c. 1670, any of them might be the hand of the youth mentioned in Boyle's preface who absconded to the Indies and was never heard of again.<sup>20</sup>

Then, a large amount of material survives in hands that date from c. 1680. The most substantial deposit is of nearly twenty leaves in BP 18, while further material is to be found in BP 2, 7 (the 'Postscript') and 46: it is tabulated in full in the Table. This material is written in hands that can be identified as A, B and C, all of them datable to c. 1680 (see Plates 8 and 9); the fact that so much of the manuscript material should be of this particular date coheres well with the date of the preface.<sup>21</sup>

Lastly, whereas none of the scribes so far referred to has been identified by name, a small amount of material relating to *A Free Enquiry* survives in the hands of two amanuenses whom Boyle is known to have employed from the late 1670s to the end of his life and to whom names can be given, Robert Bacon and Hugh Greg. Bacon's work comprises a fair copy, now BP 36, fol. 22, of material of which an earlier version survives in hand B in BP 7; material relating to the work in Greg's hand is to be found in three of the notebooks that Boyle used between c. 1680 and his death, of which a series survives among the Royal Society's manuscripts, in this case MSS 190, 198 and 199 (see Plate 10).<sup>22</sup>

Hence all the manuscripts that survive can be quite precisely dated, and the significance of this for the understanding of the growth of *A Free Enquiry* will be assessed section by section in the third part of this chapter. Here, what is significant is that the manuscripts show a clear process of accretion to the work from the 1660s up to its time of publication, and especially c. 1680. To

20 See above, pp. 54–5.

21 On hands A, B and C, see above, pp. 51–2. As far as hand A is concerned, it is worth pointing out that these passages in it are more rapidly written than those in (for instance) MS 198. On the identification and dating of hand C (which supersedes the identification of that hand in the original version of the Introduction to *Letters and Papers*, p. xxxvii), see p. 000. The evidence relating to this was first divulged in the original version of this paper.

22 See above, pp. 44–5, 47–8.



some extent, as Boyle's comments in his preface imply, he may have been trying at this time to replace material written in the 1660s that had got lost. But it is likely that in the main the material which was written at that time represented additions to, or elaborations of, his argument. That this is the case is suggested by the fact that the subject matter of one of the lengthy passages which survives in a manuscript version of c. 1680 – about the limitations to nature's watchfulness in medical matters – is very briefly adumbrated elsewhere, in a section of the text that evidently dates from the 1660s and which the added passage arguably rendered redundant.<sup>23</sup> In addition, as we will see, some of the material written c. 1680 seems to consist of preliminary versions which Boyle was evidently dissatisfied with and replaced: this suggests that these were new arguments that he was developing, rather than revisions of existing ones. Moreover, many of these manuscripts show characteristic signs of the initial composition and subsequent revision of the texts they comprise.

Indeed, quite apart from their significance for illustrating the stages in the chronological development of *A Free Enquiry*, both the manuscripts of c. 1680 and those of the 1660s are also illuminating for what they reveal about Boyle's method of composition, with implications not only for this work but for his *oeuvre* as a whole. More than one scholar has previously commented on Boyle's techniques as a writer, and particularly the extent to which the protracted process of accretion and revision, and his use of loose sheets, militated against coherence; none, however, has hitherto systematically assessed such matters in relation to Boyle's extant manuscripts.<sup>24</sup> In the case of the *Free Enquiry*, the combination of the survival of manuscript versions of different dates with the apologetic published statements already noted – which comprise some of Boyle's classic statements of the difficulties resulting from his mode of composition – renders this a particularly appropriate place to review the evidence relating to the manner in which Boyle compiled his works more generally, from initial dictation, through review of the resulting text, revision and collation, to the production of a final version.

Surviving manuscripts from the earliest phase of Boyle's career as an exponent of experimental natural philosophy and its religious implications – in the early to mid 1650s – suggest that, initially, his compositions normally took the form of lengthy, continuously paginated treatises. Extant examples have pagination running to over 100 pages, in one case to 168: this is the original version of *Some Considerations touching the Usefulness of Natural Philosophy*

23 *Works*, vol. 10, pp. 532–3. Cf. *ibid.*, pp. 511ff., 537ff., and below, pp. 243, 244.

24 See Marie Boas, *Robert Boyle and Seventeenth-century Chemistry* (Cambridge, 1958), pp. 209–12; M.B. Hall, 'Boyle's Method of Work: Promoting his Corpuscular Philosophy', *NRRS*, 41 (1987), 111–43, esp. pp. 111–16 (though the paragraph on handwriting on p. 114 should be read in the light of the discussion of this topic in chapter 1, above) and Harwood, 'Science Writing', esp. pp. 42, 46–8.



(Plate 2).<sup>25</sup> However, study of the manner in which Boyle revised such manuscripts suggests that he found such continuous texts increasingly constricting when he wished to add to and reorganise their content. The format allowed for some addition, since texts of the 1650s are consistently written on only one side of the page, which meant that additions could be made on the facing verso. But problems arose if Boyle wished to prepare a significantly altered version of a work, as with the drastic treatment – literally involving the use of scissors – which was required to convert part of his ‘Essay Of the holy Scriptures’ into *Some Considerations touching the Style of the Holy Scriptures* (1661), which is reported in the preface to the published work.<sup>26</sup> Indeed, in the case of *Usefulness* some fragments survive, evidently deriving from continuously paginated manuscripts, which have been cut up in a manner exactly reminiscent of what he says there.<sup>27</sup> Similarly, even when the existing text was not dismembered, the insertion of lengthier passages than could be accommodated in the margin or on the facing verso presented problems. As a result, Boyle had recourse to separate blank sheets of paper, folded in half to form a pair of foolscap leaves: these could either be left as bifoliate, or cut in half to form single sheets, or, if required, inserted within one another or stitched together to form slender booklets.<sup>28</sup> On these, he wrote distinct sections of text, running from the start of the first leaf to the point at which he finished dictating what he had to say on the matter in hand, which meant that much of a page was sometimes left blank: Boyle’s wealth meant that he

25 The ‘Essay of the Holy Scriptures’, BP 7, fols. 1–94 (published in *Works*, vol. 13, pp. 173–223), would have run to over 100 pages had it not been truncated (see n. 26). For manuscript sections of *Usefulness* with pagination running over 100 see BP 8, fols. 47–59; BP 10, fols. 7, 17–18, 63–4 (published in *Works*, vol. 13, pp. 296ff.). For other continuously paginated sections, see BP 8, fols. 3–28, 61, 193. In his previous, ‘moralistic’ phase, Boyle had written his MSS even more densely, on both sides of the page: on the transition from this to his ‘scientific’ phase, see Michael Hunter, ‘How Boyle Became a Scientist’, *History of Science*, 33 (1995), 59–103, esp. n. 48 (reprinted in id., *Robert Boyle: Scrupulosity and Science*, Woodbridge, 2000, p. 26n.).

26 *Works*, vol. 2, p. 387. On *Seraphic Love*, another work published in much altered form, which had originally been composed as a continuous text, see L.M. Principe, ‘Style and Thought of the Early Boyle: Discovery of the 1648 Manuscript of *Seraphic Love*’, *Isis*, 85 (1994), 247–60.

27 BP 8, fols. 55–6, 61, 192A–193; BP 10, fols. 64, 93. See also BP 38, fols. 27–30.

28 For examples, see e.g. BP 3, fols. 96–7; 8, fols. 190–5 (with sections of earlier version inserted); 17, fols. 108–13; 26, fols. 130–2 (lettered ‘A’ to ‘C’). The use of sheets of paper in this way was standard practice at the time: see Harold Love, *The Culture and Commerce of Texts* (2nd edn, Amherst, Mass., 1998; originally published as *Scribal Publication in Seventeenth-century England*, Oxford, 1993), p. 104. It is perhaps worth noting that, in most cases, such components were more than ‘loose pages’ (Harwood, ‘Science Writing’, p. 47). It should also be noted that we have used the familiar term ‘foolscap’, though in fact most of Boyle’s paper seems to have been of ‘pot’ size: see Philip Gaskell, *A New Introduction to Bibliography* (Oxford, 1972), pp. 74–5. For Newton’s use of pot-sized paper, see A.E. Shapiro, ‘Beyond the Dating Game: Watermark Clusters and the Composition of Newton’s *Opticks*’, in P.M. Harman and A.E. Shapiro (eds.), *The Investigation of Difficult Things* (Cambridge, 1992), pp. 181–227, on p. 192.

had no need to be parsimonious with paper, in contrast to many contemporaries.<sup>29</sup>

Initially, these bifolios must have been interleaved into Boyle's longer, paginated books: for instance, surviving examples are endorsed 'Ad Pag 42<sup>am</sup> marke X', or 'over against the 13th pag after Images' or 'Ad paginam septem'.<sup>30</sup> But, if so, their use in this manner seems to have inspired Boyle to adopt an alternative method of composition, which is in evidence from the late 1650s onwards: this was of compiling whole books by writing out their individual sections on sheets or groups of sheets of paper, refraining from paginating any of them so as to maximise the ease with which additions and alterations could be made. Each page was keyed to the one that followed by the use of a catchword, but apart from this, and from their physical linkage if they were a bifoliate or were stitched together, there was very little to indicate which belonged with which. Indeed, one of the curiosities of the Boyle Papers is how little of the material in the archive has original pagination at all, and in many ways it is more surprising that Boyle kept as much control as he did over his disparate material than that this sometimes led to problems of the kind that he refers to in his preface to *A Free Enquiry*. Already in the preface to his *Experiments and Considerations touching Colours* (1664) he speaks of how the work had been composed '(after my manner) in loose sheets, of which I oftentimes had not all by me that I had already written, when I was writing more', and he spoke with similar relative equanimity on the subject in *The Origin of Forms and Qualities* of 1666.<sup>31</sup> Moreover, such manuscript fragments as survive of his writings published in the early 1660s appear to have been composed in this way.<sup>32</sup>

Hence it is hardly surprising that this is the form taken by the sections of *A Free Enquiry* that survive from the 1660s.<sup>33</sup> In the 1660s (as in the late 1650s), composition took place on the right-hand page only, leaving the facing left-hand page blank; this provided space on which additional material could be inserted – as it is, for instance on the lower part of BP 10, fol. 103v. That different sections were written as separate, discrete entities is shown particularly clearly by the fair copy in BP 8, where the section ends near the top

29 Love, *Culture and Commerce of Texts*, p. 104.

30 BP 3, fol. 96; BP 17, fol. 108; BP 18, fol. 90 ('septem' replaces 'nonam' deleted). Note also BP 28, pp. 327–9, which is paginated '(3)–(4)', replaced by 'B–C'. A further intermediate stage may be represented by sections of text which run over many pages but lack original pagination: e.g. BP 16, fols. 202–21; BP 17, fols. 75–107 (paginated at the start only). An earlier instance of this is Boyle's 'Of the Atomick Philosophy', BP 26, fols. 162–75 (published in *Works*, vol. 13, pp. 225–35).

31 *Works*, vol. 4, p. 5; vol. 5, p. 288. Boyle's use of 'heads' or 'titles' to indicate the structure of a book, as (first) referred to in his *History of Cold*, *Works*, vol. 4, p. 210, is perhaps linked to this. See further Hunter, *Heads & Inquiries*.

32 See BP 10, fols. 82–5 (*Certain Physiological Essays*), 157–8 (*Cold*); BP 17, fols. 65–6 (*Colours*); BP 26, fol. 204 (*Cold*).

33 BP 8, fols. 149–52; BP 10, fols. 103–6.

of fol. 152, the remainder of which is left blank. This copy also shows that already at that time the *Free Enquiry* was divided into numbered sections, of which this was the third: subsequently, the number was changed to 'III' by the addition of a further digit (see Plate 5), probably owing to a previous section being subdivided, since, as we shall see, all of the sections that precede it in the work seem to have originated in the 1660s. As his alteration of the section number implies, even in the 1660s Boyle was clearly adding material, and this process continued c. 1680, as evidenced by the surviving material that has already been noted, in which much the same technique of composition is still in evidence. These items, too, evidently comprised discrete sections, written out separately and often ending quite near the top of the page, leaving the rest blank: a case in point is BP 18, fol. 104, of which only a part of one side has been used. On the other hand, around 1680 the practice of Boyle's scribes differed slightly from previously, in that they were less generous with paper, generally writing on both sides of the page and hence leaving less space for additions and revisions, which had to be inserted in the margins.<sup>34</sup>

Boyle's initial references to his mode of composition by the use of sections in the works of the 1660s which have already been cited suggest that he was quite happy with it.<sup>35</sup> However, from the late 1670s, he becomes more strident and apologetic about the difficulties that it caused him. The apologies in the preface to the *Free Enquiry* about the problems arising from his use of loose sheets, which have already been cited, may be paralleled in other comments of c. 1680, for instance in *Experiments and Notes about the Producibleness of Chymical Principles*.<sup>36</sup> To some extent, this may have been because the passage of time was bound to make these unpaginated, untitled sections rather confusing in comparison with the state of affairs in the first few years after Boyle had begun to compose in this way. In addition, at this point he seems to have become more self-conscious and defensive about his literary output generally. It may not be coincidental that – though he had already shown some anxiety about plagiarism in the 1660s – his concern about the way in which his writings were presented and made use of by others seems greatly to have intensified in the

34 BP 7, fols. 186–93; 18, fols. 103–21 (but fols. 112–13 and 118–20 are written on one side only). It is perhaps worth noting that Harwood is mistaken in thinking that the use of a single-sided format was a late development on Boyle's part: if anything, the evidence cited here suggests that it was the other way round (Harwood, 'Science Writing', p. 47).

35 See above, p. 229. It is perhaps worth adding that, in the 1670s, Boyle's prefaces use the argument that a work comprised disparate loose papers to explain why he was not publishing it, rather than as an apology for its published state: see e.g. *Works*, vol. 6, p. 391, where he states how certain sections of *Usefulness* remained unpublished 'partly, in regard they consist of no small number of loose Papers, which by reason of some, yet insuperable, obstacles (of which want of health is none of the least) he cannot conveniently seek out, range, and compleat'.

36 *Works*, vol. 9, p. 25. See also, for instance, *ibid.*, vol. 8, p. 326; vol. 10, p. 159; vol. 11, pp. 202, 358–9, 369ff.



late 1670s.<sup>37</sup> This may well explain why it was evidently just at this time that he began to rationalise his use of separate sheets for composition on the grounds that it was a defence against the theft or loss of his ideas, which was not a claim that he had previously made.<sup>38</sup>

It may also be significant that this apparently coincides with a further shift in Boyle's method of composition, since from c. 1680 a different practice is in evidence, in parallel with that which had predominated since the late 1650s and which is described above. From c. 1680 to the end of his life a succession of notebooks survive which were mainly used to draft passages of prose, in contrast to earlier surviving notebooks which were almost entirely devoted to memoranda and notes on experiments. Though Boyle may have indulged in such practices earlier, no specimens survive; this is almost certainly significant in itself in view of his solicitude for retaining manuscript versions of work in progress.<sup>39</sup> In the notebooks compiled in the last decade of his life, passages of text were entered in rough form, often in juxtaposition with sections of quite different works that were being composed at the same time, with disparate material sometimes even being entered on either side of the same leaf. This meant that redistribution of material could be done only by recopying, as clearly often happened, many passages being crossed through and marked 'Transcribed' even when the subsequent copy has not survived.

The two earliest extant notebooks devoted to such drafts, MSS 198–9, are of small quarto format. Both date from c. 1680. In addition, BP 46 – which, as its position right at the end of the Boyle Papers implies, probably turned up late in the process of those papers being given their current arrangement in the

37 See *Philosophical Transactions*, 11 (1676), 766–7; *Works*, vol. 8, pp. 317–18; vol. 9, pp. 29–30, 128–9 ('An Advertisement of the Publisher to the Reader, Before the Latine Edition' in *A Continuation of New Experiments Physico-Mechanical ... The Second Part* (London, 1682), sigs. a3–4, which is truncated in Birch's edition), 307–8, 359–60 ('Postloquium Editoris' in *Noctiluca Aeria* (London, 1682), sigs. S4–5); vol. 10, pp. xlviii–ix ('Monitio Editoris' in *De Specificiorum Remediorum cum Corpusculari Philosophia Concordia*, London, 1686, pp. 179–80). On Boyle's concern in the 1660s, and on this issue more generally, see M. Hunter, 'The Reluctant Philanthropist: Robert Boyle and the "Communication of Secrets and Receipts in Physick"', in O.P. Grell and A. Cunningham (eds.), *Religio Medici* (Aldershot, 1996), pp. 247–72, reprinted in Hunter, *Scrupulosity and Science*, pp. 202–22.

38 See esp. *Works*, vol. 10, pp. 305–6. See also the footnote added to the preface of *The Sceptical Chymist* in the 1680 edition (*Works*, vol. 2, p. 212); and the MSS printed by Birch in his *Life of Boyle*, reprinted in *Works*, vol. 12, pp. 359–63 (from BP 36, fols. 6, 9, 17, and BP 10, fol. 98, the latter three in the hand of Robin Bacon, who appears to have begun working for Boyle in the late 1670s); cf. Boyle's printed *Advertisement* of 1688 (*Works*, vol. 11, pp. 169–71). We are also inclined to think that the well-known letter to Oldenburg expounding this view, published in *Oldenburg*, vol. 4, pp. 98–9, is likelier to date from the very end of Oldenburg's life than from the 1660s, as suggested by the Halls.

39 See above, pp. 44–5, and below, pp. 523ff. For a fragment of what might be an earlier example juxtaposing experimental and compositional notes, see BP 44, fols. 43–9, now published as Workdiary 27 in *The Workdiaries of Robert Boyle* <<http://www.livesandletters.ac.uk/wd>>.



Victorian period – is clearly a fragment of a notebook of matching format to MSS 198–9, the pages being of almost identical dimensions. Boyle's subsequent notebooks – including the one used for *A Free Enquiry*, MS 190 – were mainly of a different, oblong format, described by Henry Miles when he studied the Boyle Papers in the eighteenth century as 'sing[ing] book[s]' (see Plate 10).<sup>40</sup> Either way, the material composed into these repositories added to the arsenal of separately written sections that the material for *A Free Enquiry* comprised, and the effect of their relatively small format was arguably to make the sections composed in them shorter, and hence potentially even more disparate, than had been the case with text initially composed on bifolios.

The manuscript versions – whether on sheets of paper or in notebooks – are also of interest for the detailed and quite vivid evidence that they provide on the actual process by which Boyle's books were drafted and revised, a topic which has hitherto been little considered.<sup>41</sup> As has already been noted, throughout the period during which *A Free Enquiry* was compiled, Boyle was almost entirely dependent on amanuenses to write his texts for him, and one occupational hazard of composing by dictation, as Boyle did, was that words might be misheard. Indeed, it is intriguing to speculate that, from such misunderstandings, one might be able to reconstruct the sound of Boyle's voice: this is certainly suggested by comparable evidence elsewhere, for instance when Robert Bacon accidentally took the word 'Mansion' for 'mention'.<sup>42</sup> In these manuscript versions, the mishearings are more trivial, but in one case a word which was initially written as 'settled' had to be changed to 'subtile', for which this seems the most likely explanation.<sup>43</sup> In addition, dictation meant that the very way in which Boyle put words together is likely to have been transmitted directly from his mouth to the page. Certainly this was the impression of one commentator who met Boyle just at the time when *A Free Enquiry* was being revised, Dr Thomas Molyneux, who wrote to his brother, the Dublin natural philosopher William Molyneux, that Boyle 'speaks very slow, and with many circumlocutions, just as he writes'.<sup>44</sup>

In addition, however, Boyle can be observed at work as a stylist, improving his text as he dictated it by trying out slightly different ways of stating things, or improving the clarity of what he said. The manuscript versions often record multiple attempts by Boyle to express himself before he was satisfied with the result. For instance, at the start of the surviving passage from the 1660s in BP 10, he began his first point concerning 'such a nature as we are speaking of' by

40 See above, p. 35.

41 But cf. Hall, 'Boyle's Method of Work', pp. 113–14.

42 Michael Hunter, *Robert Boyle by Himself and his Friends* (London, 1994), p. lxxxiv n. 67.

43 BP 18, fol. 108v.

44 Quoted in [Sir W. Wilde], 'Gallery of Illustrious Irishmen, no. XIII: Sir Thomas Molyneux, bt., MD, FRS', *Dublin University Magazine* 18 (1841), 305–27, 470–90, 604–19, 744–64, on p. 320. We are grateful to Joseph Gross for this reference.

stating that it 'seem's to me to be but precariously ...'. However, he interrupted this phrase before completing it; instead, it was deleted and replaced by 'have bin rather taken [for] granted than solidly provd'. That did not seem right either, however, so it, too, was deleted and replaced by 'to be either asserted or assum'd without sufficient proof'. By now he was satisfied, and it was this formulation that was to appear in the text as published.<sup>45</sup> A similar example is to be found in MS 198, a notebook of nearly twenty years later: looking for a formula to express the desirability of a matter being reconsidered, he first tried the words 'I think it well worth while'; then, 'well worth while' was altered to 'will not be', but then these words, too, were deleted so that the phrase was completed as 'I think it may be time well employ'd to consider', and again it was thus that it appeared in print.<sup>46</sup>

These changes must have occurred during the initial process of composition, since the alternative versions are not insertions, but are written one after another within the text. Other changes which were made in the hand of the amanuensis, however, are interlineated and must therefore have been inserted after the passage was initially compiled, perhaps when Boyle had the completed section of text read out to him. These changes often entail the insertion or alteration of words to improve the clarity of the text, for instance where 'propper' was added before 'Causes of a dark Phaenomenon', or where 'the Grand Works of Nature' was altered to 'the Corporeall Works of God', presumably so as not to cause confusion by unnecessarily invoking 'nature'.<sup>47</sup> Sometimes, a whole sentence was inserted at this point to strengthen or clarify the argument, as was the case with the following passage in section V: 'And as for the general Opinion about Nature, that being a Popular not a Physicall Argument may passe for Currant with the Vulgar, but ought not to doe soe with Philosophers'. In addition, deletions were made, so that Boyle's point was made more forthrightly, for instance by removing 'tis likely that' in a case where he was making a statement about the scriptures, or deleting 'the parts of' from the formula 'the meer Locall Motion of the parts of Matter'.<sup>48</sup> Similarly, in one of the manuscripts of c. 1680, a passage inserted in the margin concerning the role of providence in disease constitutes a simplified version of Boyle's initial attempt to express his views on the subject in the text, which was marked for deletion.<sup>49</sup>

Lastly, some quite sizeable interpolations were made, usually in the margin, but, on one occasion in the 1660s text, on the blank facing leaf. The latter,

45 BP 10, fol. 103; the word 'granted' was accidentally written twice. Cf. *Works*, vol. 10, p. 484.

46 MS 198, fol. 3. After 'be', the first stroke of another letter follows. Cf. *Works*, vol. 10, p. 537.

47 BP 10, fols. 105, 103; cf. *Works*, vol. 10, pp. 484, 486 (with 'Cause' in the singular).

48 BP 10, fols. 103–4: 'passe for' replaces 'be allow' deleted. Cf. *Works*, vol. 10, p. 484 (where the passage is slightly extended).

49 BP 18, fol. 110; *Works*, vol. 10, pp. 514–15: this is the passage enclosed in square brackets in the published text.

which is the longest of these, is a lengthy excursus concerning cosmological phenomena which began in the margin but spread to fill part of the facing blank page as well. It is interesting that, if the published text is reread in the knowledge of how this passage originated, it reads like an interpolation, and not an especially well-advised one at that.<sup>50</sup>

All the changes described so far were scribal, and must have been carried out through dictation. But, in addition to this, Boyle went through the text himself, since there are also insertions in his own hand. An example of this occurs in the 1660s section where he added the following revealing qualification concerning 'Matters of Philosophie': 'where we ought ~~not~~ to take up any thing upon Trust or Believe it without Proof'.<sup>51</sup> Similarly, in the 1680s, it was Boyle who, in his own hand, added a qualification to differentiate between what happened to 'the constitution or the motions' of the human body in illness; whereas the original text simply stated that both tended 'to be depraved', Boyle modified the passage by adding 'the former' before these words, and 'or the latter to growe anomalous' after them.<sup>52</sup>

Collation of the surviving manuscripts with the published version of the same passages shows that a certain amount of revision occurred between the phase for which we have manuscript evidence and the point at which the work was actually set in type. Here and there, words and phrases are altered or inserted, sometimes clarifying matters but often making the text wordier, while occasionally longer additions were made. Interestingly, collation of the manuscript and printed texts reveals that, whereas changes like those just referred to were clearly deliberate, in other cases minor errors crept in – apparently due to carelessness during transcription or compositing – for instance the accidental omission of a negative.<sup>53</sup> Proportionately speaking, however, such alterations within passages once written are minor: by far the bulk of Boyle's text appeared in print pretty much as it had initially been drafted, except for the insertion of whole sections to supplement or clarify his original argument. This confirms evidence from earlier writings by Boyle, for instance his *Usefulness of Natural Philosophy*, another work of which extensive manuscript material survives, where Boyle similarly seems to have altered his text little after initially composing it, except for adding entire new passages to supplement his original argument; the same is also apparent from collation of the original and published versions of *Seraphic Love*.<sup>54</sup>

50 BP 10, fols. 103v–4; the passage in question runs from l. 14 of *Works*, vol. 10, p. 485, to the end of the paragraph.

51 BP 10, fol. 103 (Boyle changed his mind as to exactly how to express himself in the course of writing this). Cf. *Works*, vol. 10, p. 484.

52 BP 18, fol. 108v. Cf. *Works*, vol. 10, p. 545.

53 For example BP 18, fol. 108. Cf. *Works*, vol. 10, p. 544.

54 Principe, 'Style and Thought of the Early Boyle'. The manuscript material relating to *Usefulness* is fully tabulated in *Works*, vols. 3, 6 and 13, passim.



What collation of the manuscripts with the printed text also reveals is a complex process of grafting which went on at some stage in the early 1680s, when Boyle must have sat down with the various sections that he had by then written and tried to splice them together into a continuous text. It is easy to understand how disheartening this must have been, as reflected in his prefatory remarks, since by this time there must have been a considerable amount of disparate material in different forms, reflecting the phases of composition already alluded to. Indeed, in a sense the longer the process went on, the more problematic it became to retain coherence. Initially, Boyle's response to this may have been to leave the work much as it had been in the 1660s and to add a separate Postscript dealing with recent developments that caused him concern, a possibility which will be canvassed in the next section in connection with the content of such of the text of the Postscript as survives. If this was his original strategy, however, he subsequently abandoned it, and instead sought to make a coherent whole by combining his original text with the disparate sections that he had prepared to complement it. This meant that he had to graft the new sections that he had written into the existing structure, and he seems to have achieved this most often by adding the new material at the end of an existing section: much of the material which was published and of which manuscript versions of c. 1680 exist comes at or near the end of a section of the text as printed (the chief exception is paragraphs 8–10 of section IV, though a careful reading also confirms their intrusiveness<sup>55</sup>). It is conceivable that certain of the latter parts of other sections were added in a similar manner, though this is unprovable since no manuscript versions of them survive.<sup>56</sup> Moreover, if the manuscripts and printed texts are collated, one can sometimes observe an elaborate process of splicing together of overlapping texts, as with the passages from MSS 198 and 199 which were spliced together and combined with material derived from BP 18 to form axiom 6 of the published section VII, or with the addition of a section from BP 2 to a passage in BP 18 to form part of section VI, in both cases involving the correlation of material in the hands of different amanuenses.<sup>57</sup>

In addition, it was at this point that decisions had to be made as to exactly what to include and what to leave out, and some material was jettisoned for reasons that will be discussed below. That decisions were still being made right up to the last minute as to what to publish is shown by the omissions from the Latin edition already noted, while it is confirmed by the fact that the manuscript version of the Advertisement apologising for the misplacing of

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55 BP 18, fols. 117–18; *Works*, vol. 10, pp. 464–5. See also the Table and *Works*, vol. 10, pp. 456–8, 511ff., 537ff.

56 This particularly applies to any or all of the latter paragraphs of section V, *Works*, vol. 10, pp. 487ff.: but see also below, 'The Treatise's Component Parts'.

57 BP 18, fols. 107–8, 105, 106, 109; MS 198, fols. 3–8; MS 199, fols. 147–50; *Works*, vol. 10, pp. 537ff. BP 2, fol. 190, BP 18, fols. 103–4; cf. *Works*, vol. 10, pp. 511–13. See also the Table.



sections of the text of the book is written on the back of a further additional section of text, which must have been added to section VII at the eleventh hour prior to its being printed.<sup>58</sup>

Hence interesting evidence is provided of the continual process of accretion by which Boyle's texts took shape, and it is to be hoped that similar attention will in future be given to others of Boyle's writings, drawing on the general conclusions about his method of composition which it has been possible to adduce here. Thus this was not the only occasion on which his use of separate sheets meant that material was printed out of order.<sup>59</sup> Neither is this the only known case of Boyle adding to his works right up to the last moment: an earlier instance is to be found in *Certain Physiological Essays*, to which Boyle added the preface to 'Some Specimens of an Attempt to Make Chymical Experiments Useful to Illustrate the Notions of the Corpuscular Philosophy' after the text had been set in print, as is revealed by the fact that in the first edition the pages on either side of it were numbered consecutively and the preface inserted, unpaginated, in between.<sup>60</sup> In addition, knowledge of his mode of composition makes it possible to flesh out Boyle's repeated apologies for the lack of coherence of his writings by showing how extraneous parts were added subsequent to their original composition.<sup>61</sup> Newton's major works have already been subjected to such scrutiny,<sup>62</sup> whereas in the case of Boyle's more disparate *oeuvre*, such study is long overdue. Clearly, however, such factors need to be taken into account in future analyses of his writings.

### The Treatise's Component Parts, with a Summary of Unpublished Manuscripts

Armed with the general view of Boyle's method of composition and revision provided by the previous section, it is now appropriate to go through the text of *A Free Enquiry into the Vulgarly Receiv'd Notion of Nature* section by section in the order in which it was printed, stating what the implications of the new evidence are for the date of composition of each section to which it is relevant, and commenting on such evidence as exists as to the likely date of component parts for which no manuscript material survives. Page references are included in parentheses in the text, first to volume 10 of the 1999–2000 Hunter and Davis edition of Boyle's *Works*, then, after a solidus (/), to the first edition of

58 See above, p. 224. MS 190, fol. 6. Cf. *Works*, vol. 10, p. 533.

59 See, e.g., MS 189, fols. 119v–21, evidently relating to *Medicina Hydrostatica*: cf. *Works*, vol. 11, p. 222.

60 *Works*, vol. 2, pp. 85–91; cf. *Certain Physiological Essays* (London, 1661), pp. 106, 107 and the unpaginated leaves between.

61 See *Works*, vol. 1 and passim.

62 See Shapiro, 'Beyond the Dating Game'; I.B. Cohen, *Introduction to Newton's 'Principia'* (Cambridge, 1971), pt 2.

1686; references to the latter are slightly more precise, given the smaller size of the pages.

At the outset it should be emphasised that only conclusions as to the dating of individual sections of the work which are based on surviving manuscript versions of the passages in question are to be seen as entirely watertight. Otherwise, although we will speculate as to which sections were probably drafted at a specific, earlier or later date, such speculations refer only to the overall 'shape' of the section in question, not to every word and sentence – or even every paragraph – within it. We have already seen how the evidence of the Latin edition, together with the material on the verso of the manuscript version of the Advertisement, shows that Boyle continued to add phrases and sentences to clarify his meaning right up to the last moment. It is almost certain that he made comparable modifications to sections initially composed in the 1660s during the revision process that occurred c. 1680. Indeed, as we shall see below under 'Boyle's Preoccupations and Antagonists', occasionally there is reason to suspect that passages in sections that seem predominantly to date from the 1660s must have been added later, in that they apparently refer to publications of an intermediate date.<sup>63</sup> Hence all statements about passages as dating from 'the 1660s' which are not based directly on manuscript evidence should be interpreted subject to this caveat.

### *Introductory Matter*

The title page raises certain dating issues in itself, since the date of publication is given as 1685/6, implying that the pages were run off before 25 March that year. (The imprimatur, given by Charles Alston, prebendary of St Paul's, on behalf of the Bishop of London, is dated 29 January 1685, presumably for 1685/6.) Yet the book was only listed in the *Term Catalogues* for May/June, being reviewed in *Philosophical Transactions* no. 181, for 25 May, while Boyle's gift of a copy to the Royal Society was noted in the minutes on 2 June.<sup>64</sup> This may have been due to delays in the latter stages of printing, possibly linked to the evidence of last-minute revision noted in the last paragraph. Alternatively, the 1685/6 dating may have stemmed from the conscious wish of Boyle and his printer to give the earliest possible date of publication, perhaps reflecting the anxieties about priority and plagiarism which, as we have seen, so much preoccupied Boyle at this time. The preface, as we have already seen, is dated 29 September 1682, and it seems likely that the bulk of the significant revision had taken place by that time, even if Boyle probably continued to tinker with it in the interim. The cause of this delay of three and a half years is unclear.

<sup>63</sup> See below, pp. 264–5.

<sup>64</sup> Arber, *Term Catalogues*, vol. 2, p. 170; *Phil. Trans.*, 16 (1686), 116–18; Birch, *Royal Society*, vol. 4, p. 487.

The evidence of the preface concerning the making of the book has already been cited at length in the first section of this chapter in connection with previous scholars' reliance on it. It is also in the preface that Boyle specifies the work's original addressee as 'Eleutherius', and the fact that this figure is described in the past tense might imply that he had since died; on the other hand, the Conclusion, which refers to the revision process and must therefore date from c. 1680, is also addressed to Eleutherius. In any case, we have no firm information as to who this figure was; it is conceivable that it was Henry Oldenburg, who died in 1677, to whom Boyle addressed such works as his *Disquisition about Final Causes* (1688) and the 'Reflections upon a Theological Distinction' appended to the first part of *The Christian Virtuoso* (1690–1). The preface also adumbrates Boyle's purpose in the work, including his wish to place himself between two extremes, 'atheists' who attribute too much to nature and 'theists' who see the vulgar notion of nature as necessary for proving God's existence and providence.

At the bottom of the last page of the preface are the catch-letters 'AD', signalling the intended insertion of the Advertisement. As already noted, this item eluded Thomas Birch, and it has remained largely unknown.<sup>65</sup> We initially learned of its existence through the discovery of a manuscript version, written on one side of a leaf in a notebook that Boyle used in the mid to late 1680s, which we will quote here (see Plate 10).<sup>66</sup> It warns the reader of an error that was not discovered until printing had reached the sixth section of the book:

By a great mistake, that unluckily happen'd to be made at the Press, divers of the loose Leaves<sup>67</sup> of the Manuscript being transpos'd, & the Errours not having been perceiv'd (by reason of the Authors absence) till they could not be corrected, without reprinting<sup>68</sup> too great a part of the Book; the Reader is desir'd to take notice, that what is contain'd between the Break in the 150<sup>th</sup> Page, & the first Break in the 156<sup>th</sup> Page, should not have come in till the Close of the V. Section at the<sup>69</sup> Page: & that what is after the first Break of the «said» 156<sup>th</sup> Page, & reaches to the Break in the 162<sup>d</sup> Page, should not have come in till divers Pages after it [viz. the Break in the 171<sup>st</sup> Page.] But «since» the Transposition, tho' it agrees not with the order, yet does not much spoil the Sense, of the Discourse, it is thought sufficient to give this Intimation of it, & Add that the Transitions, as they are now found in the mention'd Pages, are improper, but will not mar the Reasonings.

Working in haste as the book was about to be bound, Boyle incorrectly identified one of the two passages that was misplaced, a mistake that was

65 J.F. Fulton referred to it, but did not call attention to the errors it describes (*A Bibliography of the Hon. Robert Boyle*, 2nd edn, Oxford, 1961, p. 113). More recently, it has been cited in Harwood, 'Science Writing', pp. 54–5, n. 74.

66 Royal Society MS 190, fol. 6. For the dating, see above, p. 44.

67 Replacing 'Sheets' deleted.

68 Altered from 'repeating'; there is an illegible deleted word before 'without': 'lest' [?]. In the clause that follows, 'Break' was in both cases apparently written as 'Breach'.

69 Here there is a blank space. The square brackets two lines later are Boyle's.



rectified in the printed version of the Advertisement, which is included in the 1999–2000 edition of Boyle's *Works* (443/a5). On the other hand, as Boyle himself noted, though the misplacement annoyingly flawed the book, it was not so serious as to necessitate abandoning what had been printed, and he was content merely to signal the error in this way.

On the obverse of this manuscript is a brief paragraph that was printed (after some rewording) at the very end of the fourth argument in section VII (533/289), and will be discussed below.

### *Section I*

Here Boyle summarises the argument of the treatise, arguing that God needs no vice-gerent called 'Nature' to oversee the operation of the universe; he also states his main objections to the received notion of nature, and points out the superior philosophical and theological merits of the mechanical philosophy. No manuscripts relating to this section survive, but its summary nature suggests that at least the bulk of it was probably written shortly after the rest of the treatise was first set down in the 1660s. Furthermore, the mention of Eleutherius in the fourth paragraph (445/3) is likely to date from the 1660s, since such references are less frequent in later additions (though, as we have seen, the Conclusion *is* addressed to him).

Near the end of the section (451/22–3), Boyle outlines the subjects of the six main sections that he saw as making up the body of the work. The numbers given here tally with the Roman numerals I to V at the start of each subsequent section of text, but in their headings these are confusingly called 'Section II' to 'Section VII' respectively (that is, section II starts with the numeral I and so on; section VII is not given a numeral, but is called 'the sixth' part in the first line of its text). This suggests a renumbering to make what had previously been an unnumbered introduction into section I. Section VIII is conspicuous by its absence from this listing, but, although it seems likely that the latter part of that section was written (or rewritten) in the 1680s, the rest is probably largely original: it was probably omitted from this list because much of it consists of the remains of Boyle's original conclusion rather than a further main section.

### *Section II*

In this section, Boyle expounds the various ways in which the word 'nature' and its Greek and Latin equivalents were wont to be used. Most of it cannot be dated with certainty, but in general it appears to be part of the original 1660s text. It opens with an enumeration of various 'acceptions' of the word 'nature', including a reference to the six uses of the word φύσις in book 12 of Aristotle's *Metaphysics*; a discussion of Aristotle's own definition is postponed to the next section.



The final two paragraphs (456–8/39–43) contain perhaps the most famous passage in the whole treatise, in which Boyle notes that a law is ‘but a *Notional Rule of Acting according to the declar’d Will of a Superior*’; thus ‘nothing but an Intellectual Being can be properly capable of receiving and acting by a *Law*’, from which it follows that nature is incapable of obeying laws, strictly defined. These paragraphs were written c. 1680; a manuscript version of them survives as BP 18, fol. 114 (see Plate 9). A parallel text in section IV was also added at this time: see below.

### Section III

After reiterating the inadequacy of the Aristotelian definition, Boyle reviews the biblical notion of creation, making the important point that the Bible has no word equivalent to ‘nature’. He then argues that the mechanical philosophy is actually more compatible with the biblical notion of the creation than is the vulgar notion. The only internal clue, Boyle’s reference to ‘the late famous *Rabbi Menasseh Ben Israel*’ (460/50) provides no helpful dating evidence, since ben Israel’s death in 1657 predates all sections of the treatise. No manuscript material relating to this part has been found.

### Section IV

Here Boyle summarises the functions attributed to nature according to the vulgar view, arguing for the superfluity of the concept, and indicating the preferability of a mechanical view of nature. Criticising the personification of nature, he illustrates the way in which this resulted in the practice of idolatry in antiquity. The section starts with a list of ten Latin axioms about ‘*natura*’ that are criticised in the treatise as a whole. Paragraphs 7–10 (464–6/62–8), constituting a ‘Digression’ on the advantages of mechanical explanations and on natural law as but a notional thing, which parallels the famous passage in section II, were written c. 1680. The manuscript version (BP 18, fols. 112–18) has some passages that were not printed, but none is of much significance and Boyle presumably discarded them as superfluous.

The rest of this section is probably original, including the long ‘Excursion’ about the relation of such views of nature to ancient polytheism that closes this section, which Boyle signalled as tangential to his main argument by enclosing it in square brackets (470–83/82–121). Its learned subject matter links it with Boyle’s studies of biblical and related scholarship in the early 1650s.<sup>70</sup> References to Johann Hottinger’s *Historia Orientalis* (1651) and to Boyle’s own observations of the solar eclipse of 1660 give us no reason to propose a date for the digression later than the 1660s. Frequent citations of

70 See Hunter, ‘How Boyle Became a Scientist’, pp. 71ff. (*Scrupulosity and Science*, pp. 33ff.).

biblical passages also suggest the 1660s, since none of the surviving manuscripts from c. 1680 contain scriptural references.

### Section V

Here Boyle further asserts the obscurity and superfluity of the concept of nature in a series of five arguments, adducing evidence at odds with it; he also argues for God's transcendence of human reason. That the opening paragraph and the first three arguments were written in the 1660s is proved, as we have already seen, by the survival of two manuscripts of them, one a fair copy of the other, in the hands of two amanuenses of that period (BP 8, fols. 149–52 (Plate 5), and BP 10, fols. 103–6). The published text includes two additional phrases not in the manuscript versions that significantly qualify what Boyle says about matter and motion. At the end of the first paragraph of his second argument (485/127), the printed book reads, 'into which *Matter*, divided and mov'd according to such *Laws*, could, in an *Automaton* so Constituted as the Present World is, happen to be put; there can nothing fall out,<sup>71</sup> unless when a Miracle is wrought, that shall be able to alter the Course of things'. The words 'in an ... World is' and 'unless ... is wrought' are not in the manuscript version, and were probably added c. 1680. The end of the third argument was also reworded and the original final sentence was dropped.

An equally interesting change involves a passage in the middle of the argument (486/130), where the manuscript version (BP 8, fol. 151) reads:

I roundly answer that I acknowledge noe such Chymericall & unintelligible beings, & shall only desire you to apply to them a good part of the Discourse made by our Friend Mr Boyle (in the Notes upon his Essay about Saltpetre) against the pretended Origine & inexplicable nature of the imaginary substantiall Forms of the Peripateticks.

The printed text omits the allusion to 'our friend Mr Boyle', referring readers instead to 'certain Papers, occasion'd by a Chymico-Physical Essay about *Salt-petre*'. This is an allusion to Boyle's *Origin of Forms and Qualities*, which had its origin as notes on the 'Essay on Nitre' in Boyle's *Certain Physiological Essays*.<sup>72</sup> Though the second formulation is hardly a more direct reference than the first, it is possible that the first was written before the publication of *Forms and Qualities*; the reference to Boyle as 'our Friend' could be linked to the original form of *A Free Enquiry* as a discursive work addressed to Eleutherius.

The manuscript version also promises that there will be 'III' arguments in this section, not five, so one must have been added later. Probably this was the fourth, aimed at showing certain unidentified 'Divines' who are numbered 'amongst the *Naturists*' (487/132) that the vulgar notion of nature is actually

71 Here the manuscript version has 'happen'.

72 *Works*, vol. 5, pp. 287–8; Hall, 'Boyle's Method of Work', p. 113.

dangerous to religion in general. The argument has some similarity to that of a manuscript section from c. 1680, BP 18, fols. 115–16, which did not appear in the published version of the work and which will be discussed below; it also has something in common with the sentiments of Boyle's *Disquisition about Final Causes*, which was begun in the 1670s and revised simultaneously with *A Free Enquiry* in the early 1680s.<sup>73</sup> It is also slightly intrusive, whereas the fifth argument, which claims that nature is less perfect than it ought to be if there really is an intelligent agent called 'Nature' that oversees things, follows naturally from the third. This fifth argument includes a lengthy segment on hydrostatics, an obvious subject for Boyle to raise in the 1660s, and it could well have been written at that time.

The rest of section V is out of order, as Boyle discovered with dismay after the sheets had already been printed and as he explained in the Advertisement prefaced to the book. The five paragraphs about whether God was bound to create the best possible world belong after the paragraph about providence and the fall, where they indeed fit much better. Also, the section was intended to terminate with the brief penultimate paragraph, the long final paragraph about God, nature and chance having been intended as the conclusion of the next section (VI). Since, as we saw in the previous section, *A Free Enquiry* – like others of Boyle's treatises from the late 1650s onwards – was assembled from various coherent, separately dictated sub-sections, it is easy to see how their correct order could be confused. Here we have concrete evidence of this occurring, and, since Birch did not come across the Advertisement in which the error was divulged, this has meant that the text from which the *Free Enquiry* is generally known is defective in its ordering at this point.<sup>74</sup>

## Section VI

In this section, Boyle answers various arguments thought to favour the vulgar notion of nature, criticising evidence supposedly displaying purposefulness or appetite on the part of bodies and arguing for the superiority of mechanical explanations. The first part, on local motion, is probably original. The marginal note on 502/189 cites the appendix to Boyle's *Hydrostatical Paradoxes*, printed in 1666, with which it may be contemporaneous. On 505/198 he speaks of 'the Russian Czars chief Physician' as if he were still alive. This was Dr Samuel Collins (1619–70), physician to Czar Alexis Romanov from 1660 to 1669, and author of the posthumously and anonymously published *The Present State of Russia* (London, 1671), which was written in the form of a letter to an

73 *Works*, vol. 11, pp. 79–151. See E.B. Davis, "Parcere nominibus": Boyle, Hooke and the Rhetorical Interpretation of Descartes', in Hunter (ed.), *Robert Boyle Reconsidered*, pp. 157–75, esp. p. 167.

74 This is corrected in *Works*, vol. 10, pp. 494–6, and in the Cambridge text referred to in n. 13, pp. 71–3.







23

(158) of in their proper places. And to how  
 unlikely Effects humane Industry may  
 make knowne Experiments, subseruient,  
 \* by the common parts  
 of this salt water sugar  
 too in the preparation  
 too much a conseru  
 find by the common parts  
 of the best authors  
 best Experiments  
 that there is no material  
 made of very strong & very sharp  
 lee though one would  
 not more likely altogether  
 is harder & by day ashes  
 is contraindicated the perception  
 of our Senses & the  
 that such an effect  
 want to be wrought even without  
 Caldo, or already conserued  
 separated piece of sugar  
 we are informed  
 told a  
 by the former conserued  
 Piece who in the  
 make account to be  
 given us of the  
 thing sugar (it is  
 or exasperated  
 immutability conserued  
 forte quidem liquorem  
 aliquid hinc per  
 liat an percolatur  
 said in loco  
 necessarium  
 in quod  
 aid of the  
 inueni  
 speaks in the  
 that the truth  
 which this has  
 for an instance  
 obvious enough in

may appeare in every garden where the  
 Petio duna & Excrements of beasts gives  
 nourishment & growth to those lovely and  
 fragrant flowers that most charme our  
 senses. as alsoe in the common  
 practice of burning the hearth. Salt to  
 ashes, for though it would scarce be suspected  
 the darke ashes of a weed should con-  
 siderably promote Astronomical Obser-  
 uations & discoveries of seemingly soe  
 remote a Nature, as those made by Galilaeo  
 Planets about Iupiter & new stars  
 the further part of the  
 we all know that the ashes of this  
 weed, by promoting by its saline  
 the fusion of the other hot Ingre-  
 dients to be whirled with it, eminently  
 the Glassmaker for the making  
 that pure Venetian Glass, which wrought  
 according to the Lawe of Opticks, and  
 well truly plac'd in Tubes, discovers to  
 our moderne curious Astronomers diuers  
 shines in heauen ascene by the Eyes  
 of the most diligent of their Predeces-  
 sors, And thus though Salt of Tartar  
 is a hot Body & of a fixt Quality  
 yet being dissolved in Aqua  
 Regia, though that be thought the  
 fierest

2 Part of the manuscript of the original version of *The Usefulness of Natural Philosophy*, written in the 'rounded' 1650s hand, with additions in the margin in the 'angular' 1650s hand. This is page 158 of a once continuous text. Published in *Works*, vol. 13, pp. 309–10 (see also *ibid.*, pp. l–li). BP 10, fol. 63. Dimensions of original: 302 mm by 194 mm.

Philosophicall Entyce  
Memorials.

(Of all sorts.)

Here confusedly & thrown together, to be  
transferred to the severall Treasuries  
where they belong.

1. London Aug 2. The velocity of an Iron Ball a foot & 2 inches  
Diameter being let fall, was found by an accurate  
Instrument to move  $18\frac{1}{2}$  foot in a 2 minutes  
of time. ~~at 30 feet~~  
This Exp<sup>t</sup> was made & repeated at  
the Gunner in Chelf.

2. We went to Schoole at Oxford  
where single Vibrations were half second, we  
measured the increase of velocity of a descending  
Ball of Iron fastend by a string to a Instrument, & for  
the most part our Observations agreed in this, that  
in 4 single Vibrations a very little more of Iron Ball  
the height between the Bottom of a Schoole & the  
Instrument amounting to 30 feet, & 10 inches  
from 50, then we shortened the string & made  
it sometimes 36, sometimes 30 feet, & string full of  
Iron we found as we expected, that it fell some  
that length in 3 single Vibrations, & when the length  
was 30 the Pendulum seemed to begin to a year the  
returne. The same Ball let fall from a Tower  
the Schoole where it is 80 feet high, appeared falling  
longer than a single vibration, & not 6. ch. 10.

- 3 The opening page of Workdiary 19, dating from 1662–5, with an unusually elaborate title. The text is in hand F; the title and endorsements are in Boyle's hand. BP 22, p. 1. Dimensions of original: 299 mm by 204 mm.

	The Order of my severall Treatises	114
1	The Engine Booke	1
2	Physiologicall Essay about contagion & expts	3
	The History of Humidity & firmness	4
3	The Scepticall Pyrronist	5
4	The Defence of the Noble & famous	6
5	The excellencies of Expt & philosophy	7
6	of Colours	8
7	of Taste	9
8	The unobscured part of Metaphysicall	10
9	Appendix to y <sup>e</sup> Engine Booke	11
10	Hydrostaticall Paradoxes	12
11	The origins of Forme & Qualities	13
12	The History of Qualities	14
13	Spontaneous operations	15
14	of compiling a naturall Historie	16
15	of Improbable Truths	17
16	The Scepticall naturalist	18
17	Concerning Sensation in Generall	19
18	Considerations & Expts touching recult Qualities	20
19	of y <sup>e</sup> origins of minerals especially Iron	21
20	Of other stones	22
21	Historia Naturalis sparsa, or promiscuous Expts	23
22	of observations in y <sup>e</sup> forme of a Syllogism	24
23	Miscellaneous Physicall or Expt. Discourses, observa	25
24	tions &c on severall Philosophicall Subjects	26
25	Communicated Observations Physiologicall & medicinal	27
26	Varia Section Physica	28
27	Topica instructionum on severall Subjects	29

- 4 'The Order of My Severall Treatises', c. 1665. This is the fullest version of this text, with entries missing from previous recensions and with numbers to the right as well as the left of the titles. It is in hand E. Published in *Works*, vol. 14, pp. 331–2 (see also *ibid.*, pp. xl–xli). BP 36, fol. 114. Dimensions of original: 288 mm by 190 mm.



From now Euthymus to acquaint you with some of the Reasons yet have made me backward to entertain such a Notion of Nature as I have hitherto disowned of. And I shall at present comprize them under the following IIII.

The first whereof is That such a Nature as is now speaking of comes to me. be either asserted or refused without sufficient proof. And this single Reason if it be well made out might I think suffice to serve my turn. For in matters of Philosophy where we ought not to take up any thing upon Trust or Belief but to be of it enough not to believe a thing if we have not positive Argument to induce us to do so. though we have not particular Argument against it. as if the Philosopher be to take place in those cases we ought to hold in this where we are to entertain a Belief of so great a thing as Agent of all, & others are looked upon but as Instruments, & act in subordination to it. In being said to have an immediate Agency in many of Nature's Phenomena cannot but be supposed to be demonstrable by direct of them. I have yet not a direct physical Argument either demonstrative or so much as generally probable to induce the Existence of a Nature now examined. And though I should admit of it if some Divines contend for of Holy Scriptures in Philosophicall Controversies yet I should not be persuaded of the Existence of a Nature as a Spoke of the Wheel. For I do not remember that any Scripture anywhere declares of there is such a thing. though in some places there be a hint of it. as in the works of God are expressly to be seen of (though in order to spirituall Ends) one might probably expect to find some Mention of Gods grand Vicegerent in the World of Bodies if He had established any such. But of the Existence of a Nature I find no mention about this matter of Philosophy sufficient to justify me for examining freely by Reason. I am content on my Belief by Revelation. And as for the Philosophicall Arguments in favour of a questioned Notion of Nature I have examined the principall of them & shew if they are not convincing. As for the general Opinion about Nature's being a Body I have not time to examine. Arguments may pass for Current & vulgar, but could not to do so in this.

The second Reason is taken from the Unreasonableness of such a Nature as is pretended. For since a great part of the work of true Philosophers has been to reduce the Principles of things to the smallest number they can without making them insufficient. It is not why we should take in a Principle of it we have not need. For supposing a common matter of all Bodies to have been at first divided into unnumerable minute parts by the wise Author of Nature. & those parts to have been for the purpose of it for me if we could comprehend as it now is. especially if it were a fallacious Motion among the parts of a Matter have been established. & several conventions of the whole & divided into the seminal Principles of various things, all in my knowledge by the mere local motion of Matter (not left to itself but continually guided at the beginning of the world) if I may so say, to these things together with Gods ordinary & general Concurrence. is very reasonably me.

- 5 Opening page of a self-contained section of the text of *Notion of Nature*, in this case the start of what was to become section V (initially 'III', altered to 'IIII'), in hand K, dating from the 1660s. See *Works*, vol. 10, pp. 483–4. BP 8, fol. 149. Dimensions of original: 295 mm by 192 mm.





Take one part of the mineral, 4 or 5  
and 6 or 7 of Asbestos or the Operation. Let  
it run together in a brick fire and separate  
the

- 7 The first page of Workdiary 34, dating from the early 1680s, which has suffered from chemical damage. The first entry is in the hand of John Warr; the remainder is in that of Frederick Slare, with additions (in pencil) by Boyle and (in ink) in an unidentified hand. BP 25, p. 51. Dimensions of original: 299 mm by 189 mm.

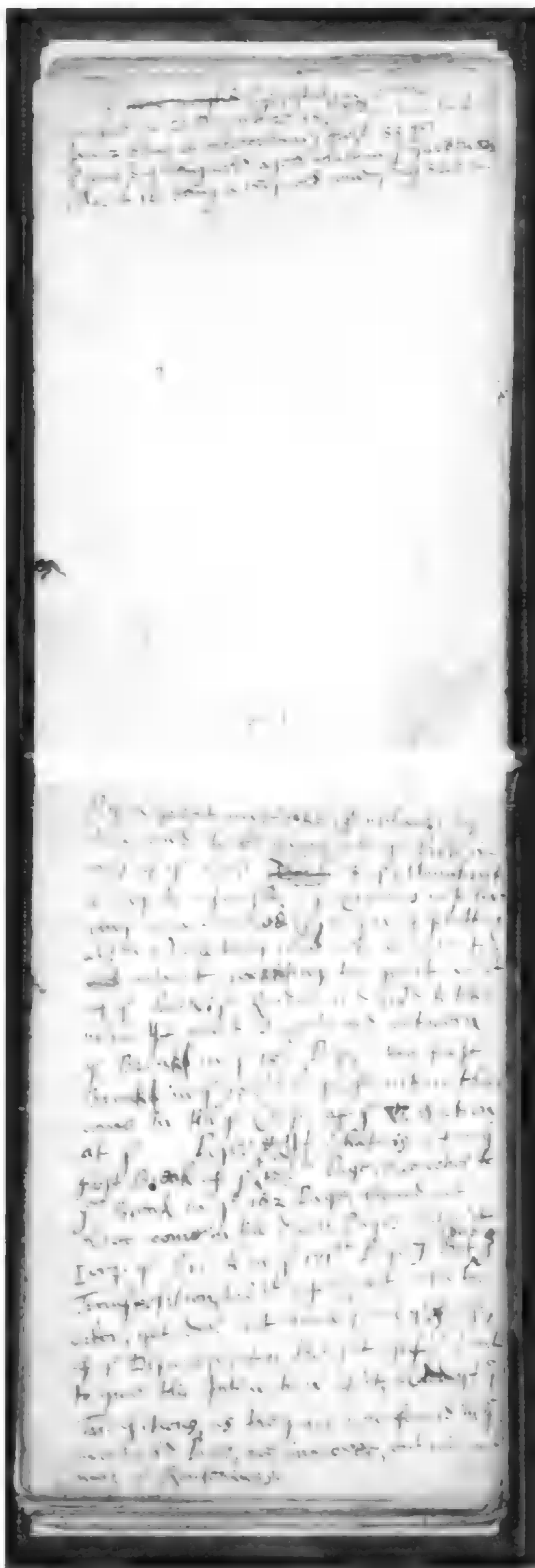
[illegible]

- 8 A section of the text of *Notion of Nature* in hand B. This is a portion of axiom VI of section VII: see *Works*, vol. 10, pp. 545–6 (which includes a lengthy section missing both here and in the Latin edition). BP 18, fol. 105v. Dimensions of original: 293 mm by 199 mm.









- 10 Draft of the 'Advertisement' to *Notion of Nature*, in the hand of Hugh Greg, together with an experimental observation dated 27 December 1688. This is an opening from a typical example of Boyle's notebooks, with an oblong format which led Henry Miles to describe them as 'singing books'. Royal Society MS 190, fols. 5v–6. Dimensions of original: 329 mm by 108 mm.



## Materials.

For the Paralipomena.

Whose twenty foure Titles are mentioned in this Page.

18. 1. The Particulars that are here confusedly set down, are to be hence Erased out, and each of them refer'd to that Title to which it belongs in the Books, where these Titles each of them has more or fewer Leaves of Paper distinctly allotted to it. 2. The Ordinall Numbers plac'd in y<sup>e</sup> Margine of this Chaos are set down for the conueniency of References. 3. The Alphabet Letter that accompanies each number, shews to what Title the Particular where the number is prefix'd does belong. If ~~more~~ more Letters than one, the same number, all but the first denote, that although the Particular belongs primarily to the Title signify'd by the first Letter, yet 'tis also referable to the Titles pointed by the other Letter or Letters: And if no Letter at all accompanies any number 'tis a signe, that the particular belongs to one or other of those six last Chapters of the Paralipomena that haue no Titles importing their Subjects prefix'd to them, (in y<sup>e</sup> Book wherein an Account is giben of the Designe and method of these Collections.

## An Index of y<sup>e</sup> Chapters of the Paralipomena.

Chap. 1<sup>st</sup> contains.

1. A. Particulars for the most part referable to the discernment of suppositions.
2. B. Pts belonging chiefly to y<sup>e</sup> Essay of improbable Truths.
3. C. Pts for the most part referable to the Origine of Gemms.
4. D. Pts referable chiefly to y<sup>e</sup> changes of Colours.
5. E. Pts belonging chiefly to y<sup>e</sup> Memoirs of the History of Tin.
6. F. Pts belonging to the Letter about the tryal of Ires.
7. G. Pts referable chiefly to the Origine of Minerals.
8. H. Pts many of them referable to the Dialogues of the Melioration & Transmutation of mettals.
9. I. Pts that may be referable chiefly to y<sup>e</sup> Production of Inflammability.
10. K. Pts most of them referable to the Examen & improvement of the Materia medica.
11. L. Pts referable to the danger of too soon for shaking Experiments upon probable Reasons.
12. M. Pts referable to the Treatise of various Observations about y<sup>e</sup> Air.

13. Chap contains

13. N. Particulars contains some loose Memoirs, belonging to y<sup>e</sup> History of Flame.
14. O. Pts belonging to y<sup>e</sup> Essay of strange Narratives.
15. P. Pts belonging to the Surfaces of Contiguous fluids.
16. Q. Pts belonging to the Essay about y<sup>e</sup> Porosity of Bodys.
17. R. Pts belonging to the Essay of the Pores of Bodys & figures of Corpuscles.
18. S. Pts belonging to the tracts of Effluuiums.
19. T. Pts to the various Effects of Fire, as differingly apply'd.
20. U. Pts belonging to the mutual usefulness of Speculative & Practicall Physicology.
21. V. Pts belonging to the Essays about y<sup>e</sup> Physiologicall, Pathologicall & Dieteticall parts of Physick.
22. X. Pts belonging to the Therapeutical part of Physick.

The truly, & by those I am a stranger to, any such  
 papers as those I now send you, will be look'd upon  
 as effects of vanity, as if I thought my former  
 writings were worthy of a comment. But I have  
 many of them I happen'd to be so well known to You, to fear  
 I should not but you will put such a construction on y<sup>e</sup> effect  
 of my obsequiousness, indeed if particular you saw  
 would come then a Supplement, which when an author himself  
 is rather a tacit acknowledgment y<sup>e</sup>  
 advantage if y<sup>e</sup> is judges what he writ, for perfect, then a proof  
 that he did not he overvalue it. I have in another paper  
 rather choos'd to give an account of y<sup>e</sup> inducements y<sup>e</sup> prevail'd  
 must their good with me to lay up moral observations & expe-  
 riments, in way of Paralipomena & appendi-  
 culars to some of my other writings. But at present  
 I will be needful & pertinent only to take notice,  
 y<sup>e</sup> Reason why I consent to y<sup>e</sup> publication of  
 those ~~papers~~ tracts, is not only to comply  
 with y<sup>e</sup> forwardness you are pleas'd to show of  
 having them appear in so good company as  
 you admit them to, but because y<sup>e</sup> Collection of  
 my Paralipomena being not like to be finish'd  
 much less to be publish'd, in haste I was willing  
 y<sup>e</sup> some experiments y<sup>e</sup> were not so necessary to  
 it, may not so long be conceal'd; whilst you  
 think they may in y<sup>e</sup> mean time, either gratify  
 or afford some not useless Information to y<sup>e</sup>  
 cultivators of Experimental Philosophy. These  
 Intimations I desire may serve for a General  
Preface to those Shreds of paper, for which I may  
 now & then endeavour to procure room, in your  
 various Transactions.

- 13 An emended manuscript version of one of the texts published in chapter 4, in the hand of Thomas Smith, with a pencil addition by Boyle in the margin, and another in ink towards the end of the text. BP 36, fol. 14. Dimensions of original: 293 mm by 196 mm.



Aug 23 1692

97

Il Galbano dissoluto alo vino cigionando  
olio de camomilla. olio de ambole dulce. —  
olio de pignole olio de gigli bianchi et olio  
de termina configili con uno poco de cera  
bianca & ne untariti per doi volte lo di lo  
actinto: et noe poneriti sopra una cotica de  
larbo de serofa untata de termina & da  
sopra la cotica noe ligariti stoppa de cana:  
no continuando quisto ordine p dieci di, dopo  
lauriti lo male con vino caldo & ce meche:  
riti mele loto & rose: dopo piglia. de mele  
comune ℥ij. termina ℥iv. Diactera ℥ij. filigreci  
pistati ℥ij. Desementa de sinapi ℥ij. de uolo  
arminio ℥ij. & fariti bollere tutte queste cose  
con lo mele, dopo caldo quanto lo. Ca: po  
sofferir lo stendite sopra uno pano & poin:  
tilo sopra lo actinto mutandolo ogni di  
p octo o dieci di.

Honored Sr.

I am afraid I shall not light a so constant a  
friend as the Honble Esqr. would wish I am in Experience  
let me know w<sup>t</sup> kindnes you honor think it is not  
I must wait on Providence til a further Light.

Writen by in Chancery Lane  
at ye. Crown.

Honored Sr. your humble  
servt. Robt Bacon.

- 14 Italian recipe transcribed by Robert (Robin) Bacon and dated 23 August 1692, together with a note from Bacon to Sir Robert Southwell. Royal Society MS 248 (Southwell Papers), no. 8. Dimensions of original: 287 mm by 181 mm.

Dr. Gred	303
Prince of Adalath -	304
Mr. Hayes	305
Baron Helberg -	306
Mr. Hook	307
Mr. Kirkby -	308
Dr. Lyler	309
Merolaki	310
Dr. More	311
Id.	312
Mr. Raworth	313
Mr. Russell	314
Dr. Paul Rycant	315
Jac. Carotti	316
Spinosa	317
to Mr. Scholberg	318
Dr. Stubbe	319
Mr. Symon	320
Mr. Tyndal	321
Mr. Vaughan	322
Mr. Vameising	323
Mr. Weidenfeldt	324
to P. R. Moray	325
<p>Letters, concerning Translations of the Bible in several Languages</p> <p>the order of Council to relieve Chilinsky, Author of the Translation of the Lithuanian Bible - 1662</p> <p>Mr. Ellich about the N. Eng Land &amp; Bible &amp; Grammar in 4 Languages 326 1663</p>	

327 Mr. Leuman, abt the Turkish Testament.	181 1669
328 Mr. Leuman has a 100 Contribution from the Turkey Company towards printing the Turkish Testament & Lexicon	1669
329 Mr. Chylinski -	1669
330 Id.	1669
331 Dr. Marshall, abt Malayan Diction	1670
332 Dr. Hall, abt the Irish Testament	1678
333 Id. de cod -	1679
334 Dr. Marshall, abt the Irish Testament	1681
335 Dr. Hall, de cod -	1681
336 Dr. Marsh, abt the Distribution of the Irish Testament	1681
337 Bp. of Meath abt Irish Testament	1683
338 Mr. Maunstone, abt Malayan Gram	1683
339 Dr. Huntington, abt Irish Test.	1683
340 Bp. of Mann abt Irish Test.	1683
341 Mr. Leuman abt Map of Greece Version of St. O. Test into Turkish	1683
342 Mr. Ellich abt N. Eng Bible	1683
343 Dr. Huntington abt Irish Bible	1684
344 Id de cod -	1684
345 Id de cod -	1684
346 Bp. of Meath abt Irish Testament	1688
347 Mr. Kirkwood of reprinting St. Bible	1688
348 Thanks of St. Ellich by Mr. Harding for N. Eng Bible	1690
349 Mr. Kirkwood abt Bible in the High Land &c	1690
350 Letter Minister, Thanks for St. Bible	
351 Mr. Haffey, abt Gothic Devotion	
352 Preface to Irish Testament in Arabic - &	
353 Concerning distribution of High Land Bible	

15 Part of William Wotton's inventory of Boyle letters. Published in *Correspondence*, vol. 6, pp. 397-414 (on pp. 408-10). BP 36, fols. 180v-1. Dimensions of original: 320 mm by 205 mm.

- List of Papers marked 7
- A. Propagation of *Gossypium* in N. L. *Quarten*.
- B. half sheet (of Bacon's writing) Relation —  
magnetism of Earth.
- C. Copies of letters of Mr B. to his sisters & c.  
this is W. go to c.
- D. Diary of his life.
- E. A mine — Flowers without seeds raised.  
De Respiratore. Folio  
Do a mod: difficult. Propagation actually  
flourish in Vacuo Regl. Fol.  
— second sight.  
Papers presented to J. L. C. 2<sup>d</sup>. to Reginald Baxter.  
in Mr Oldenburgh's hand. Fol.  
— 2<sup>nd</sup>. Entel. on artificial life & of Rhase, thick.  
being dialogue Rhase. Carnatione. etc. in ADD.  
— Loose papers on various subjects not XXX.  
\* 2. which — i. d. 2<sup>d</sup> c. 2. I think they might  
— not known & abundance of loose papers.  
printed — 1. 3. of long X. into vulg. & edition of nature.  
— Propos. for citing Poor on works. Examine.  
— Catal. of Mr B's Books & Pamphlets. not of his  
only 21 in library.
- F. Copper plate for trials —
- G. Papers designed to be put into J. B. of his writing.  
hands.
- H. Treatise of Exper. of Spring & of air. 1652
- ADD. I. } Meteor. Papers —  
2. } Reflections on Script. occas. Medit.  
Self Conversat. many other subj. referring  
to be finished — & not printed perhaps 2.
- K. a thick 4<sup>to</sup>. Mr Oldenburgh's writings containing  
various subj.  
Excerpta ex Republ: Ecclesi: Archiep: Spalatensis  
marci Anton. de Bon: Galactide et Gualde &  
— Notabilia quadam, de Romana Ecclesia —  
— Collatione privatum Antijudaicum habitum  
ultraj: sub D. Gual. Voetio captum d. 12  
Sept. 1641.  
— Ex vauis Georg: quodam Excerpta.  
— Rayon centrala Poix de Hellaud:  
— Melchior Legand: Historia & de Bonitatu  
— de carter caning with low Castles  
— Trifurcation  
— translation French.

unnamed friend who has since been identified as Boyle. The implication is that this passage was written before Collins' death in 1670.<sup>75</sup>

The important argument about medical crises, however (511–16/219–35), was composed c. 1680. The earliest surviving manuscript version comprises BP 46, fols. 3–5, three leaves which, as we saw above (under 'Boyle's Method of Composition'), are probably derived from a notebook similar to MSS 198–9. This ends mid-sentence near the top of fol. 5, the rest of which is blank. Just two sentences at the start of the argument were retained (in modified form) in the final version. Otherwise, a brief general argument about the 'Terraqueous Globe' as comprising 'liveing Engines' enabled to cope with 'distempers & other hurtfull accidents' by divine foresight was replaced in the published text by a much longer, more specific argument about the evacuation of morbid matter. The next five paragraphs (516–18/235–44) probably date from c. 1680; certainly the transitional paragraph does. The last full paragraph on 518/243–4 ties the two sections together effectively, as if they were written together, and on 517/239 there is a parenthetical comment about the 'Mark *N.B.*' that links them more strongly. The last three paragraphs, on the other hand, may well have been written in the 1660s. In fact, as Boyle's Advertisement shows, the final paragraph of section V was intended to go here; it does indeed make a fitting conclusion to a consideration of arguments that seem to favour the vulgar notion.

## *Section VII*

In 'the Sixth and Difficolest part' of the main body of the treatise (which is also the longest), Boyle sought to show how the mechanical philosophy explains natural phenomena better than the vulgar notion, which saw nature as purposive, by examining six of the commonplace axioms about nature that he had stated in section IV. Overall, Boyle defends the view that purpose is to be found not within nature, but over and behind it, in the mind of God. The existence of natural evil is seen as an argument against the notion of an intelligent nature, and in favour of a providence that is not completely conformable to reason: God's purposes are not always apparent to his creatures. Most of this was probably written in the 1660s, but the transitional paragraph at the end of axiom IV (533/289) was written at the last minute: the manuscript version of it is on the obverse of that of the Advertisement, itself written only after Boyle saw sheets of up to page 171 of the published version of the book.<sup>76</sup> Hence the latter part of the book, including this section, had

75 See the letter from Collins to Boyle of 1 September 1663 printed in *Correspondence*, vol. 2, pp. 104–8, which alludes to a conversation between them on p. 105. See also *ODNB* and L. Loewenson, 'The Works of Robert Boyle and "The Present State of Russia" by Samuel Collins (1671)', *Slavonic and East European Review*, 33 (1955), 470–85.

76 The printed 'Advertisement' refers to p. 248, but the manuscript version only to p. 171: this is therefore a clue to the amount that had been printed at the time when it was written.



evidently not yet been printed, and Boyle was still able to make changes even at this late stage.

Axiom VI, on nature as a healer, was written c. 1680, and the published text is the result of the process of splicing together manuscript material from BP 18 (see Plate 8) and MS 199 referred to above (under 'Boyle's Method of Composition') and summarised in the Table. It is perhaps worth noting here that comparison of the surviving fragments with the printed text reveals that the manuscript version has several lacunae which exactly match passages missing from the Latin edition, thus confirming that – here as elsewhere in the published work – Boyle must have added these at a very late stage, after a manuscript copy had already been given to Abercromby for translation. A second Latin translation, prepared by an unknown person and never published, has a set of lacunae exactly matching those in Abercromby's published translation.<sup>77</sup>

### *Section VIII*

In the closing section, Boyle argues for the corporeality of nature, which therefore cannot think. The most satisfactory explanations of natural phenomena are mechanical, not those of the 'vulgar' conception, which is dispensable. Unlike the six previous sections, section VIII has no number at the start of the text, presumably because it was once Boyle's conclusion rather than a separate argument. The long 'Advertisement' about thinking matter (554–60/357–76) was apparently written separately from the preceding part, but might as easily date from the 1660s as later. Boyle's overall conclusion clearly starts immediately after this passage on 560/376, where he turns to consider the services he may have done 'both to *Natural Philosophy* and to *Religion*'. On 561/380 he says, 'in another Paper, I purposely discourse of what *Naturists* call *Faculties*', almost certainly a reference to *The Origin of Forms and Qualities* (1666). The wording could imply that this passage was written prior to, or simultaneously with, the publication of that book, though see p. 241 above for a further, equally vague reference to *Forms and Qualities* in section V which is apparently a later revision.

On 564/390 Boyle proceeds to his comments on religion. This closing part was probably initially composed in the 1660s and substantially rewritten c. 1680, perhaps replacing the Postscript which Boyle originally wrote but then suppressed. His conclusions about divine freedom and theodicy, especially his emphasis on the good of the whole economy of the creation rather than the

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77 See BP 29, fols. 219–48. The Boyle Papers contain Latin translations of several works, many of them by Thomas Ramsay, that are different from the published translations; in some cases, there is more than one translation of the same work. This puzzling fact might indicate a desire by Boyle to extend patronage to as many persons as possible, leading him to commission more translations than he actually intended to use. See above, p. 63.

welfare of individual creatures, are very similar to points developed at greater length in the *Disquisition about Final Causes*, which was also finished in the early 1680s.<sup>78</sup> Boyle even cites that work by name, though it would not appear until 1688, in a note on 568/403. Indeed, it could be argued that the two works have much in common in their concern about the proper role and limitations of teleological reasoning.

### *Conclusion*

This reiterates the points made in the preface about the chaotic composition of the book which have already been cited, and hence must date from c. 1682. It is puzzling that, despite this, it is addressed to Eleutherius, who is in the preface referred to in the past tense. The tone of the Conclusion is important: Boyle reminds the reader of his intended hesitancy and tentativeness despite the extent to which he might have diverged from this 'in the heat of Discourse' (569/407–8). As will be seen, certain similar remarks in the unpublished Postscript could suggest that he suppressed that document in favour of these far less explicit statements. Finally, he implies that a revised version of the treatise might be forthcoming; however, there is no evidence for any further work on it on his part following its publication.

### *Unpublished Manuscripts*

What of the material which was *not* included although written? Some of it duplicates in a slightly different way points that Boyle had already made elsewhere: one might suggest that, coming back to the work after some years, he started rewriting and found that he was simply repeating himself. For instance, the text on BP 18, fols. 112–13, echoes various themes that appear in sections which apparently already existed, including a generalised attack on the usage of 'nature', together with references to the 'particular & as it were Municipall constitutions that obtaine among some sorts of Bodys' (echoing that to 'Municipal Laws' in the published version: 524/257), and to suction in a pipe (paralleling that earlier in the treatise: 466/68–9). Similarly, BP 18, fol. 119, overlaps with that part of section IV (478/104–5) where Boyle disparages 'divers of the Old Sages' for worshipping nature in the guise of the soul of the world. A passage from Seneca quoted at length in the printed text is cited briefly in the manuscript, which makes a similar point about the error of conflating God and nature.

Other unpublished passages are trial runs for sections that Boyle did include, but which were not so cogent in their arguments, such as the version of his response to the argument from crises in BP 46, discussed in connection with

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78 See above, p. 242.

section VI above. Here, we wish to call attention to three manuscripts, all of them written c. 1680 by the same two amanuenses in whose hands most of the other manuscript versions of this treatise were written, which started new lines of argument that Boyle apparently decided were dispensable. These have all now been published in volume 14 of the 1999–2000 edition of Boyle's *Works*, and page references to that will be given preceding the manuscript reference in each case.

In the first (158–60/BP 2, fols. 187–9) – endorsed by Boyle with the note ‘Transcrib’d by Robin’, indicating that Robin Bacon made a copy which no longer survives – Boyle draws a comparison between ‘art’ and ‘nature’, seeing both as similar reifications in ordinary speech. Thus (158/fol. 187) we are ‘frequently wont to say that Art did this thing or that thing was made by Art when yett the thing of which this is spoken is a Physicall production or Phænomenon’. When we speak this way, ‘we ought to understand that ’tis produc’d by Physicall Agents operateing according to, or if you please with regard to, certaine Ideas & Rules apt to facilitate the effect or Phænomenon produc’d’. This is not an idea that was to appear in the book, and Boyle may have felt that he was confusing the issue by introducing a new line of argument in this way.

Secondly, the most problematic, but easily the most interesting, omission is the ‘Post-script’. One section of what was clearly intended to be a two-part document exists in its entirety; the second apparently does not survive, and may not even ever have been written (though for speculation concerning its intended content, see below). The introduction and what Boyle called ‘The 1 Section’ fill fifteen folio pages and are published in the 1999–2000 edition of Boyle's *Works*.<sup>79</sup> Both the identity and the approximate date of this remarkable text are obvious from the start. Boyle begins by explaining how ‘The foregoing discourse tho written as the Præface tells you, above a dozen years agoe; apear[ing] now before you without takeing Notice of what has since been done in the Commonwealth of Learning wherein it may be concerned’ was intended to be accompanied by observations dealing with ‘some things ... that I have since mett with among Able Men ... that probably will be thought, *some* of them to reflect highly upon Mechanicall Philosophizers in generall, & consequently upon me; & *some* of them to containe Arguments very favourable to the receiv’d Notion of Nature, that I am dissatisfied with’ (147/fol. 186). According to the preface, the treatise was begun about 1666, so the Postscript must have been written no earlier than 1679. If the preface to which reference is made is the existing one, dated 29 September 1682, we can date its composition to the period between late 1682 and the book's publication; however, it is not impossible that the current preface replaces an earlier one, to

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79 BP 7, fols. 186–93. A clean copy of the opening lines of the preface by Robin Bacon survives as BP 36, fol. 22. In the following quotations, deletions and insertions are silently ignored: these are tabulated in full in the edition of the text in *Works*, vol. 14, pp. 147–57.



which this reference may be alluding. What is almost certain is that the Postscript was written simultaneously with the completion of Boyle's *Disquisition about Final Causes*. The Postscript contains certain very close paraphrases of passages later published in the *Disquisition*, a fact which is easily explained if Boyle dictated the former while the words of the latter were still in his mind (or *vice versa*).<sup>80</sup>

Boyle's purpose in the extant first section of the Postscript was to answer what he obviously regarded as a very serious, but mistaken, objection to 'the Mechanicall Hypothesis', the arguments in favour of his own interpretation of which he recapitulated in the course of the text. First, there were those who said that it undermined the role of God in the creation of the world, since both the origin and the present working of all things were attributed to matter and motion alone. Boyle saw the force of this claim, and he agreed that Epicurean atomism amounted to atheism. His strategy in replying was to attempt to promote a deeper understanding of the mechanical philosophy by showing that there were actually three schools of mechanical philosophers (147–9/fols. 186–7). These were the Epicureans, 'that wholly exclude the Diety from haveing any thing to do in the Makeing or Preserving the world'; the Cartesians, 'who allow that God have Created the Matter of the universe but did no more then impress such a determinate quantity of Locall Motion upon the whole Mass, which he constantly preserves in it without increase or diminution'; and those whom Boyle called the 'Anaxagoreans', who preferred mechanical explanations to the principles of the peripatetics, 'yett are they far from thinkeing the Mechanicall affections of matter sufficient to have brought the parts of it into so goodly & admirably artificiall a frame as that of our world without the direction of a Most Wise & powerfull Agent that is in one word, of God'. In the main, Boyle said, critics of the mechanical philosophy recognised only the Epicureans, though some would distinguish these from the Cartesians (towards whom he himself adopted a moderate stance, softening Descartes' opposition to final causes while approving the central role of God in Descartes' metaphysics).<sup>81</sup> Such critics failed to see that a third viewpoint existed, which was happy to affirm the primacy of the spiritual realm and to deny the adequacy of blind mechanisms for the formation of the world and the creatures that populate it. Moreover this was one which, Boyle stated, 'as to the maine I declare myselfe to prefer to both the others', because he shared Anaxagoras' view that mind was essential for explaining the origin of motion.<sup>82</sup>

'Nor are these my private sentiments alone', Boyle continued (151–2/fol. 189v), 'but are as to the main concur'd in by divers virtuosi both English &

80 See esp. BP 7, fols. 187v, 188 (149–50), and *Works*, vol. 11, p. 94.

81 See Davis, 'Parcere nominibus'.

82 149/BP 7, fol. 187. Of course, Boyle went well beyond Anaxagoras by attributing the origin of matter itself, as well as motion, to God.



others that are wont to explicate things mechanically'. Thus Boyle wished that his 'Censurers', as he called them, would be more discerning of differences among mechanical philosophers, 'in short [that] they would make a difference (where there is indeed a great one) between the Epicurean Philosophizers & those that I have above call'd Anaxagoreans', who found it necessary 'to require a Being equally & perfectly wise & powerfull' to be the 'Architect' of the world. 'I readily acknowledge', Boyle admitted (153–4/fols. 191–2), 'that Leucippus and his followers Democritus & Epicurus' had no 'recourse to a Divine Agent & some few others at this present time will allow no other real substance then matter in the world'. 'But for us that (in matters meerly Philosophicall of which alone they mean it) applaud that generous motto of the Royall Society – *nulius in verba* – and in the opinions of uninspired Men take & leave as wee see cause', he added, 'we thinke it not just to have imputed to us those errors of the Antient Atomists that we utterly disclaime'. Just as it was acceptable for 'the generallity of the Divinity schooles of Uroupe [sic] to imploy & cry up the Peripatick principles of Physiques tho they disclaime the Eternity of the world' and reject Aristotle's paganism, so it was acceptable for Boyle and other modern naturalists to explain the world in terms of matter and motion, without endorsing the godless way in which the ancient atomists had interpreted their system. Yet it was 'no new thing', Boyle commented ironically on his own situation (155/fols. 192v–3), 'to have Men that are freinds to Religion & perhaps Champions for it severely scensur'd by those whom they cannot joyne with in reverenceing some favorite opinions of theirs', for Anaxagoras himself had been 'derided' and 'accus'd of Atheisme' despite his insistence on an 'incorporeal Diety that putt matter into Motion & fram'd it into the World'. Nonetheless, Boyle concluded understandingly, 'the severe Censures are but the effects of their Zeal to maintaine Religion against Atheisme'. Therefore Boyle could 'easily tollerate the effect of so laudible a cause', as he was 'more influenc'd by my finding them heartily ingag'd in the main quarrel with me against irreligion than by the fault they find with the weapons I employ'.

Here the first section of the Postscript ends, in the middle of a page, with almost nothing having been said about the 'Arguments very favourable to the receiv'd Notion of Nature, that I am dissatisfied with', the second point that Boyle mentioned his intention to deal with in the opening paragraph. What happened to the rest?

One possibility is that it comprised the third (and final) discarded manuscript text that we have found, BP 18, fols. 115–16, a fragment of two folio leaves written on both sides that ends abruptly in the middle of a sentence, the rest of the document being lost. The first two sides were written by one of the same two amanuenses who penned the opening section of the Postscript, and the rest was written by the other. Though the hands change abruptly with the turn of page, the final word on fol. 115v is repeated on fol.

116, so nothing is missing. Either Boyle may have changed amanuensis at the page break, or (more likely) what originally followed the text on fol. 115v was discarded and replaced with the contents of fol. 116. But additions in each hand can be found on both pages, indicating that Boyle revised the document several times, dictating changes to whichever of the two amanuenses happened to be at hand. That this document was written at much the same time as the Postscript is suggested, not only by the similarity of handwriting, but also by the most notable revision, to be found at the top of fol. 116, where the word 'Anaxagorean' replaced the adjective 'reform'd' to modify 'Mechanicall Philosophy' (p. 156). As we shall see, Boyle spoke of the 'Anaxagorean' philosophy in no other place, published or unpublished, than here and in the Postscript – and in each case, the word was added during revision. This confirms that the two documents were written at about the same time, thus raising the possibility that Boyle decided to join the separate manuscripts into two sections of a single, final Postscript to the treatise.

The subject of this document is the claim put forth by certain anonymous divines that the received notion of nature was more advantageous to Christianity than the mechanical philosophy. 'What great advantage Religion gaines by the Vulgar notion of nature', Boyle began (155–6/fol. 115), 'I confess I do not see'. Then he spelled out the reasons why Christians ought to distance themselves from this idea. If nature is a corporeal being, a material agent 'able to uphold & govern the whole universe & produce in it the most admirable peices of workmanship', then there is no need for 'an higher & incorporeal Agent. Such reasonings as these may be expected from Athiests'. Supposing instead 'that Nature is not a meerly Organical but an Intelligent Being, those that say this will do well to consider whether they do not hearby resigne up the best Physical Argument, we have to prove against Athiests the Immortallity of the Soul. For if matter can think & act for knowne ends with great wisdom', then how can the soul be proved an immortal substance capable of surviving the body? Next Boyle considered (157/fol. 116) the view that it was 'below the Majesty of God or repugnant to the quietness of his felicity to descend to the management of Corporeal things without such a Vicegerent as Nature to performe the meaner functions & offices of Government'. Against this, Boyle noted that 'God was the immediate Author of things & made not only the Heavens & the starrs but the meanest of plants & despicablest Animals', without harming his majesty. None of God's works were 'unworthy of their Author nor consequently of his providence', for on the sixth day of creation 'they were found to be *all of them* very good'. Shortly after this the document ends abruptly at the bottom of a page, with a catchword indicating that more text once followed which no longer survives among the Boyle Papers.

Though it is conceivable that it belongs to the Postscript, however, a likelier possibility concerning this document is that it was a section of text for the

main body of the book which, like others already noted, Boyle composed c. 1680 but then decided not to include, on the grounds that it added little to what he had already said. It thus overlaps particularly with section VIII – the overall conclusion of the treatise, where Boyle offered some final comments on religion and the vulgar notion of nature – though it also covers similar ground to the section probably added to section IV at this time. Perhaps most decisive is the fact that, contrary to Boyle's statement at the start of the Postscript that the arguments that he was going to deal with comprised 'what has been since done in the Common-wealth of Learning', and particularly the recent 'Arguments very favourable to the receiv'd Notion of Nature, that I am dissatisfied with' which he had encountered, there is no evidence that the topics that he dealt with here were novel ones.

Instead, an alternative hypothesis as to the content of the putative second part of the Postscript is that initially it was here that Boyle dealt with arguments which he subsequently decided to address in the main text, notably the medical arguments for the purposiveness of nature that he confronted in sections VI and VII. Possibly, as already suggested and as the wording of the Postscript's introduction implies, Boyle's first intention when he began to revise what he had written in the 1660s was to leave what remained of the original text much as it was, updating it simply by adding an addendum dealing with matters that he had come to feel required more attention than he had given them in the original version of the book. A possible parallel is with the intended appendix to *Final Causes*, though in that case the intention was formulated after the book was published.<sup>83</sup> Then, however, he decided that at least some of the arguments involved were too important not to be incorporated into the work itself, so he proceeded to insert them by adding sections to the main text where they fitted best.

If this hypothesis is correct, then it is possible that the decision was one that Boyle made after writing the first section and before he actually began the second, and therefore that the second part may never have been written as a separate document. It is worth noting that the original version of the first section ends part of the way down the recto of a sheet, the rest of which is blank, while the heading labelling it 'the 1 Section' was inserted after it was originally composed. If so, this might suggest that Boyle had begun to have second thoughts as to whether a Postscript was a good idea even as he wrote it: moreover, this might provide a reason for the suppression of the part that survives along with that which does not, since the rerouting of a substantive part of the Postscript's intended content to the main text might have left the

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83 See BP 9, fols. 35–41, Robin Bacon's clean copies of material from two notebooks, MS 185, fols. 29–31, and MS 191, fols. 110–16, which were clearly written after *Final Causes* appeared; published in *Works*, vol. 14, pp. 165ff. In the case of *Notion of Nature*, it is worth noting the implication of Boyle's Conclusion that he might return to the topic at a later date (*Works*, vol. 10, p. 570).



residue rather exposed. However, this is increasingly speculative, and we will return to the question of why he suppressed the first part of the Postscript in the next section, in connection with the issue of who it might have been aimed at in the first place.

### Boyle's Preoccupations and Antagonists

We now turn to consider the opposing points of view that Boyle had in mind in writing his *Free Enquiry*, considering particularly what can be learned by juxtaposing the evidence concerning the evolution of the different components of the work that has so far been expounded with what is known of its broader context both in the 1660s, when it was first written, and c. 1680, when it was revised. At the outset, however, it is necessary to enter some caveats about Boyle's overall polemical method, and the difficulties caused by the rather imprecise manner in which he often refers to his antagonists, not only in this work but throughout his *oeuvre*.

Boyle's reaction against the artificiality that he associated with academic disputes is well documented and has become well known. He specifically stated that arguments about ideas should not be needlessly personalised, and that care should be taken to avoid offending actual or potential allies. Scrupulously concerned to be fair, Boyle was also anxious that debates should be balanced, and that the points on which he happened to disagree with fellow Christian apologists should not be allowed to obscure the degree of consensus between them.<sup>84</sup> Because of this – and perhaps also because imprecision had the advantage of deflecting potential counterattacks – Boyle is often frustratingly vague in his references to his antagonists, which means that extreme caution is required in elucidating his response to them. Thus Boyle rarely named contemporary opponents unless they had already attacked him. He was prone to equivocate even in describing broader categories of people who caused him concern. The more general the category, the easier it is to be sure of his target, whereas his remarks about more specific opponents are often unhelpfully offhand.<sup>85</sup> Hence caution is in order, and we do not share the confidence in identifying Boyle's antagonists that has been shown by some commentators on *A Free Enquiry*.

What is not in doubt is that the work gives expression to preoccupations to be found in Boyle's thought from the 1650s onwards. Its theme is first stated in Boyle's 'requisite Digression concerning those that would exclude the Deity from intermeddling with Matter', Essay 4 of Book 1 of *Some Considerations*

84 *Works*, vol. 2, pp. 19–21, 207ff.; Shapin and Schaffer, *Leviathan and the Air-Pump*, pp. 72ff.; Davis, 'Parcere nominibus'.

85 See Hunter, 'Introduction' in *Robert Boyle Reconsidered*, pp. 12–13.



*touching the Usefulness of Experimental Natural Philosophy*, an essay that was clearly interpolated after the rest of Book 1 was originally written, and which probably dates from the mid 1650s.<sup>86</sup> This passage forms part of an onslaught on Aristotelianism for being at once potentially irreligious and lacking in intelligibility: indeed, the former theme is if anything more overt here than in the *Free Enquiry* itself, evidently reflecting Boyle's early hostility to Aristotelianism for its irreligious overtones.<sup>87</sup> Speaking of 'the Principles of the vulgar Philosophy', Boyle attacks thinkers – both Aristotelians and others –

who ascribe so much to Nature, that they will not be reduc'd to acknowledge an Author of it ... [who] content themselves to tell us, That Nature does such and such a thing, because it was fit for her so to do; but they endeavor not to make intelligible to us, what they mean by this Nature, and how meer, and consequently bruit, Bodies can act according to Laws, and for determinate Ends, without any knowledge either of the one or of the other.<sup>88</sup>

Boyle was to continue his attack on Aristotelianism – especially on its intelligibility as a philosophical system – in the 1660s, particularly in his *Origin of Forms and Qualities*: this work was said to have been composed several years (and copied out in full about three years) before it was actually published in 1666, the year when *A Free Enquiry* was supposed to have been on the loom.<sup>89</sup> Boyle's concern there was with the intelligibility of the concepts of 'quality' and 'form' invoked as explanatory principles by scholastic philosophers, advocating instead the superiority of the explanatory principles furnished by the corpuscular philosophy; the latter theme clearly resonates with that of the *Free Enquiry*. In *Forms and Qualities*, Boyle specifically noted how he 'forbore such *Arguments* as those, that suppose, in Nature and Bodies inanimate, Designs, and Passions proper to Living, and perhaps peculiar to Intelligent Beings', and his attack on them in *A Free Enquiry* is to be seen as a part of the same overall intellectual programme.<sup>90</sup>

As far as the *Free Enquiry* is concerned, Boyle makes it quite clear in passages

86 *Works*, vol. 3, pp. 244ff. Cf. *ibid.*, pp. xix–xx. Extracts from this are preserved in Henry Oldenburg's commonplace book, Royal Society MS 1, fols. 121–8. Collation of Oldenburg's notes on this passage with the published version suggest that quite a lot of interpolation may have occurred between the version that Oldenburg saw and the final text (though this could be due to his being sparing in his annotations): possibly, the text went straight from the section concerning the vacuum to the passage quoted here, omitting the intervening passage about menstruation.

87 See Hunter, 'How Boyle Became a Scientist', esp. pp. 75–7 (*Scrupulosity and Science*, pp. 37–9). In *Notion of Nature*, on the other hand, though canvassing its irreligious implications, Boyle acknowledged that 'the received Notion of *Nature* doth neither subvert, nor much endanger any Principle of *Religion*': *Works*, vol. 10, p. 483.

88 *Works*, vol. 3, pp. 246–7, 250.

89 *Works*, vol. 5, pp. 284, 288, 293; vol. 10, 441.

90 *Works*, vol. 5, p. 292. Cf. McGuire, 'Boyle's Conception of Nature', p. 528.

which are clearly integral to the 1660s component of the book that his chief target in it was scholasticism, and particularly the scholastic conception of nature. Though he describes the notion of nature that he deals with as 'vulgar' – in the sense of being commonplace – and though he agreed that phrases implying nature's purposiveness were 'us'd by Men of all sorts, as well Learned as Illiterate', he was adamant that the naturalism that he attacked was a largely learned phenomenon: it was 'the *Peripateticks*, whose School either devis'd, or mainly propagated, the Received Notion of *Nature*', which was instilled by education, 'especially in the Schools'.<sup>91</sup> In particular, he was concerned with Aristotle's use of the word φύσις, which he subjected to detailed scrutiny in sections II and IV of the work.

It has been claimed by J.R. Jacob that Boyle's hostility to scholasticism was linked to anti-Catholic views on his part, and it is true that, in *The Origin of Forms and Qualities*, Boyle complained of the extent to which aspects of the philosophical views of which he disapproved were derived from the 'Theology of the Schools: (which I wish lesse interwoven with *Aristotle's* Philosophy.)'.<sup>92</sup> On the other hand, this theme is not overtly pursued in *A Free Enquiry*. Quite apart from the fact that Boyle's anti-Catholicism was muted compared with that of many of his contemporaries,<sup>93</sup> the point was that scholasticism was not a specifically Catholic doctrine: rather, it was a common view among the educated, whether Catholic or Protestant. In addition, the fact that it was commonplace means that it is not necessary to search for specific Peripatetic opponents for Boyle.<sup>94</sup> Though Boyle had crossed swords with certain scholastic commentators over the views expressed in his *Spring of the Air*, notably Francis Linus, he did so because they had publicly disagreed with him, and he made it clear that they were representative of a wider body of opinion in any case.<sup>95</sup>

Moreover, contrary to Whiggish presumptions that the new science had already ousted it, recent research is making increasingly clear how vital Aristotelianism remained in England in the period when Boyle was at work on the book. This was a point that Boyle himself emphasised to those who might doubt it in a passage of *Forms and Qualities* that is worth citing at length:

91 *Works*, vol. 10, pp. 450, 454, 464, 468. Cf. *ibid.*, pp. 487, 500, 527. For similar usage on Boyle's part elsewhere in his writings see, e.g., *ibid.*, vol. 2, p. 87; vol. 4, p. 209; vol. 8, p. 326. For an interpretation of 'vulgar' as meaning 'vulgarised', see Jacob, 'Subversive Religion', p. 292; *Robert Boyle*, p. 176.

92 *Works*, vol. 5, p. 292; Jacob, 'Boyle's Atomism', pp. 214–16, 217–18.

93 Boyle was usually careful not to engage in anti-Catholic polemics and did not write *Reasons Why a Protestant Should not Turn Papist* (contrary to what is stated in Jacob, 'Boyle's Atomism', p. 223; *Henry Stubbe*, p. 149). See Davis, 'Anonymous Works of Boyle', esp. pp. 621–2. See also Hunter, 'How Boyle Became a Scientist', pp. 74, 80 (*Scrupulosity and Science*, pp. 36, 43–4).

94 As does Jacob in 'Boyle's Atomism', pp. 214–16, who singles out Linus in this connection.

95 *Works*, vol. 3, pp. 10–11.

And though some *Virtuosi*, more conversant perhaps with Things then Books, presuming the Decay of the Peripatetick Philosophy to be every where as great, as tis among Them in *England*, may think that a Doctrine, which they look on as Expiring, need not have been so sollicitously confuted: yet those that know, how deep rooting this Philosophy has taken (both elsewhere, and particularly) in those Academies, where it has flourish'd for many Ages, and in some of which tis, exclusively to the Mechanical Philosophy, water'd and fenced by their Statutes or their Superiours: and he that also knows, how much more easie some (more subtle, then Candid) Wits, find it plausibly to defend an Error, then ingeniously to confess it; will not wonder, that I should think, that a Doctrine so advantag'd, though it be too erroneous to be Fear'd, is yet too considerable to be Despis'd.<sup>96</sup>

On the other hand, it is clear that, even at this point, Boyle also felt anxiety about other philosophies that reified nature, which he alludes to more or less explicitly at different stages in his book. One contemporary who is named, though in connection with his doctrine of God's corporeality, is Thomas Hobbes; it is possible that, in addition, Boyle saw Hobbes' views as having the implication of making nature purposive in a manner which overlapped with those attacked in the *Free Enquiry* as a whole.<sup>97</sup> It is also possible that, in the 1660s, Boyle was already concerned about the views of the Cambridge Platonists as expressed by the principal exponent of that school writing at that point, Henry More, with whom Boyle was to cross swords in print in the 1670s; there are thus certain passages which could refer to ideas of a 'spirit of nature' of the kind that More and his colleagues espoused, and certain of these may well have formed part of the 1660s text, though none is documented by manuscript evidence.<sup>98</sup> It is also possible that Boyle already identified the Helmontians as holding views which could be seen as reifying nature, although again there is no direct evidence that the relevant passages date from this period.<sup>99</sup>

This brings us to the argument of J.R. Jacob that, in the 1660s, Boyle had in mind a quite specific target for the work in the form of Henry Stubbe and his putative followers. This forms part of an elaborate hypothesis by Jacob about Boyle's intellectual strategy at this stage in his career, and it is worth laying out fully the evidence on which his claim is based, since this should instil caution in accepting the construction that Jacob places on it. The key passage cited by Jacob occurs in the excursus at the end of section IV of the *Free Enquiry* which

96 *Works*, vol. 5, p. 296. For an overview stressing the significance of Aristotelianism in the period, see C. Mercer, 'The Vitality and Importance of Early Modern Aristotelianism', in Tom Sorell (ed.), *The Rise of Modern Philosophy* (Oxford, 1993), pp. 33–67.

97 *Works*, vol. 10, p. 565. See Shapin and Schaffer, *Leviathan and the Air-Pump*, pp. 201ff.: however, Shapin and Schaffer arguably exaggerate Boyle's concern with Hobbes in this particular context.

98 See esp. Westfall, *Science and Religion*, p. 84; Steneck, 'Greatrakes the Stroker', pp. 173ff. But see also Hutchison, 'Supernaturalism', p. 329 n. 4.

99 See esp. McGuire, 'Boyle's Conception of Nature', p. 529. See also below, pp. 261–2.



deals with the relationship between the 'vulgar' notion of nature and ancient polytheism, not least as espoused by Julian the Apostate; as seen above, this probably dates from the 1660s. The passage in question reads:

Nor are Christians themselves so much out of danger of being seduc'd by these Heathenish Notions, about an Intelligent World, but that (not again to mention the Apostate Emperor) even in these times there is lately sprung up a Sect of Men, as well professing Christianity, as pretending to Philosophy; who (if I be not misinformed of their Doctrine) do very much symbolize with the Ancient Heathens, and talk much indeed of God, but mean such a One, as is not really distinct from the Animated and Intelligent Universe; but is, on that account, very differing from the True God, that we Christians Believe and Worship. And, though I find the Leaders of this Sect to be look'd upon, by some more Witty than Knowing Men, as the Discoverers of unheard of Mysteries in Physicks and Natural Theology; yet their *Hypothesis* does not at all appear to me to be *new*, especially when I remember, besides the Passages of the Ancients, cited in this Paper, some others of the same Import, such as is particularly that of *Lucan*.

Boyle then cited a passage from Lucan's *De bello civili*, a speech attributed to Cato in which God was seen as coterminous with the universe.<sup>100</sup>

Let us now scrutinise Jacob's interpretation of this passage. At the outset, it is worth pointing out (since Jacob does not) that it occurs in a section of text which Boyle himself saw as tangential to his main theme, since the entire excursus is prefaced by an advertisement:

*N.B.* Those, that do not relish the knowledg of the Opinions and Rights of the Ancient *Jews* and *Heathens*, may pass on to the next or V. Section, and skip the whole following Excursion, compris'd between double Paratheses's, which, though neither impertinent nor useless to the scope of this Treatise, is not absolutely necessary to it.<sup>101</sup>

It is also worth examining the stages of Jacob's deduction. Initially, in a passage in his *Robert Boyle and the English Revolution* (1977) which had earlier been published in an article in *Albion* in 1974, he associated the 'sect' with John Heydon and a group who moved in court circles in the 1660s, whom he linked with the passage just quoted from the *Free Enquiry* as 'answering this description'. Later in the same paper and book, however, Jacob invoked Henry Stubbe alongside Heydon as Boyle's likely target.<sup>102</sup> Subsequently, first in an

100 *Works*, vol. 10, p. 475. For a further, similar allusion, see *ibid.*, p. 564, where he speaks of 'divers Modern Professors of Christianity, who have of late reviv'd, under new Names and Dresses, the impious Errors of the Gentiles'. For the passage in Lucan, see *De bello civili*, ix, 578–80.

101 *Works*, vol. 10, p. 470.

102 Jacob, 'Subversive Religion', pp. 277–8, 286; *Robert Boyle*, pp. 161–2, 169–70. Cf. *ibid.*, pp. 175–6, 'Subversive Religion', pp. 291–2. It is perhaps worth noting that, though Heydon's



article in *Social Studies of Science* in 1978 and then in his *Henry Stubbe, Radical Protestantism and the Early Enlightenment* (1983), Jacob associated the ‘sect’ exclusively with Stubbe and his supposed followers. Jacob saw it as plausible that the passage quoted above did indeed form part of the original version of Boyle’s book, ‘because there was a group active in the mid 1660s who fit Boyle’s description of the “sect” in question and because Boyle was in dialogue with the leader of this sect, Henry Stubbe, during the very period in which *A Free Enquiry* was written’.<sup>103</sup> Now, Heydon fails to reappear at all, although Jacob never tells us why he has changed his mind from seeing him as Boyle’s target along with Stubbe to an exclusive emphasis on the latter.

This unexplained switch might cause the reader some disquiet in itself, suggesting a degree of capriciousness in Jacob’s interpretation of the passage. However, let us here concentrate on Jacob’s preferred link of the passage with Stubbe, and his contextualisation of it in Boyle’s supposed ‘dialogue’ with Stubbe in connection with the episode involving Valentine Greatrakes that occurred in 1665–6. The issues arising from Jacob’s interpretation of the Greatrakes affair and Boyle’s role in it cannot be dealt with at length here, but suffice it to say that in our view his reading of it is distorted by imputing a decisiveness to Boyle which is at odds with the evidence.<sup>104</sup> In fact, Boyle was highly perplexed by the whole matter, spending much time in empirically assessing Greatrakes’ cures for himself, although ultimately remaining agnostic about them. Not least for this reason, he was understandably upset when Stubbe made him the dedicatee of his tract *The Miraculous Conformist*, in which he put forward a highly heterodox reading of Greatrakes’ gifts. Hence, in a letter written to Stubbe on 9 March 1666 on receipt of his book (and before his empirical investigation of Greatrakes’ cures for himself, which took place in April that year), Boyle was at pains to differentiate his views from Stubbe’s.<sup>105</sup>

As this letter shows, Boyle does seem to have felt that Stubbe was an exponent of the vulgarly received notion of nature. On the other hand, the way in which he raised this point – by referring to what is apparently his own

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views may have very generally partaken of the reification of nature to which Boyle was opposed in the treatise, the specific ideas on his part that Jacob itemises are quite tangential to the main thrust of the *Free Inquiry*.

103 Jacob, ‘Boyle’s Atomism’, p. 218. Cf. *ibid.*, pp. 217, 219; Jacob, *Henry Stubbe*, pp. 56–7.

104 See Michael Hunter, ‘The Conscience of Robert Boyle: Functionalism, “Dysfunctionalism” and the Task of Historical Understanding’, in J.V. Field and F.A.J.L. James (eds.), *Renaissance and Revolution: Humanists, Scholars, Craftsmen and Natural Philosophers in Early Modern Europe* (Cambridge, 1993), pp. 147–59, on p. 153 (*Scrupulosity and Science*, pp. 58–71, on p. 64). Peter Elmer is currently preparing a new study of the Greatrakes affair.

105 *Correspondence*, vol. 3, pp. 93–107. For Boyle’s notes on his observations of Greatrakes’ cures, dated 6–15 April 1666, see British Library Add. MS 4293, fols. 50–3 (published as Workdiary 26 at <<http://www.livesandletters.ac.uk/wd>>). See also *A Brief Account of Mr Valentine Greatrakes, and divers of the Strange Cures By him lately Performed* (London, 1666), esp. pp. 43ff.

*Free Enquiry* as if it had been written some time previously – hardly makes it sound as if it was Stubbe who had inspired the work:

As to what seems your maine Hypothesis, that Mr. Greaterick performes his Cures by the strengthening, & reinvigorateing of Nature, which, being releivd & fortifyd by the Sanitive Effluvia that passe from his Body into the Body of the Patient, doth afterwards vanquish the Disease her self; I doubt not but that you will have many of your Readers of that Opinion with you, & particularly those Helmontians & other Chymists that hope or plead for Universall Medicines, operateing by the way of Restauratives, will be glad to find you to countenance their Tenent. For my part unlesse I could send you what I once drew up by way of Disquisition about the receiv'd Notion of Nature (wherein perhaps I doe not acquiesce) I cannot think it proper to mention to you my particular thoughts of the power of strengthend Nature.<sup>106</sup>

This is rather different from a view of Stubbe as the leader of a specific heretical sect. Indeed, there is no evidence whatever that Boyle identified Stubbe as a member of an identifiable 'sect'. The nearest that Jacob has to evidence for this is a letter to Boyle from his friend, the doctor Daniel Coxe, in which he claimed that Stubbe's enterprise would

exceedingly oblige those who like himsele are so intent on the gratifications of Sence, or Evill Passions that either they have nor will or leasure to think of a Deity or immortall soules; or have so much Philosophy as to reason themselves out of their Religion [as] a fond persuasion wherein a Company of pittifull Superstitious credulous persons who have not deposited native & acquired prejudices are deluded.<sup>107</sup>

Much later, in 1682, the virtuoso John Beale was to talk of 'Stubbians' in his letters to Boyle: but this was the windy rhetoric of a rather out-of-touch figure living in rural Somerset, written in the aftermath of Stubbe's well-known assaults on the Royal Society in the years around 1670.<sup>108</sup> There is no evidence whatever of Boyle himself thinking of Stubbe as leader of a sect, either in the 1660s or later.

It is also questionable whether Boyle would have used the term 'sect' to describe a small, contemporaneous group of the kind that Jacob has in mind,

106 *Correspondence*, vol. 3, p. 102. It is interesting that in this letter, written early in the year in which Boyle stated in his preface that he wrote the *Free Inquiry*, his use of 'once' implies that it had been written somewhat earlier; however, this is still consistent with his statement that the work was begun 'about the Year 1666' (our italics). What he said to Stubbe may have been a deliberate piece of evasiveness on Boyle's part.

107 Coxe to Boyle, 5 March 1666, *Correspondence*, vol. 3, p. 89.

108 Beale to Boyle, 26 June, 8 July 1682, *Correspondence*, vol. 5, pp. 299, 310. Cf. Beale to John Evelyn, 29 April, 29 May 1682, British Library, Add. MS 78318 (formerly Christ Church, Oxford, Evelyn Papers, Correspondence, nos. 146, 152). See Jacob, *Henry Stubbe*, pp. 143–4. Cf. also Jacob, 'Boyle's Atomism', n. 30.

even if such a one existed and he had recognised Stubbe as leading it. In fact, it seems likelier to denote a more established and better-known group, though here the reader should recall our remarks at the start of this section about Boyle's unhelpful vagueness in referring to opponents, since we would be the first to acknowledge that it is far from clear exactly whom he *is* referring to in this passage. Subject to this caveat, a few possibilities may be canvassed. It seems to us unlikely that the 'sect' was the Cambridge Platonists, even if Boyle may have seen their idea of a 'spirit of nature' as an example of the 'vulgar notion'. Similarly, Spinoza seems an unlikely candidate in the 1660s, before the publication of his major works (he was in any case not a Christian, as Boyle presumably knew, whereas the sect was specifically said to be Christian). A further possibility is a group of which Boyle is likely to have been aware: the Behmenists, followers of Jacob Boehme – although we would have to acknowledge that, in contrast to the state of affairs with Henry More, there is no explicit reference to the Behmenists in Boyle's writings.<sup>109</sup> Certainly, Boehme had been widely influential among the radical sects during the Interregnum, and his worldview, in which God was seen as immanent in the natural world, bears at least some resemblance to the description that Boyle gave of his 'sect' in the passage quoted above.<sup>110</sup> However, perhaps the likeliest group for Boyle to have been referring to are the followers of Paracelsus, since it appears to have been something of a commonplace in the late seventeenth century that Paracelsian views involved the attribution of intelligence to parts of the universe: not only Boyle but also Malebranche and Leibniz invoked the concepts of 'idolatry' and 'paganism' in this connection.<sup>111</sup> However, we do not wish to argue strongly for any identification, since Boyle's studied vagueness should warn against any firm claim of the kind championed by Jacob.

It is perhaps worth noting at this point that, though Jacob has also speculated about the threats that may have concerned Boyle at the time when

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109 See Sarah Hutton, 'Henry More and Jacob Boehme', in ead. (ed.), *Henry More (1614–1687): Tercentenary Studies* (Dordrecht, 1990), pp. 157–71. We are grateful to John Henry for his advice in this connection. Cf. also Guido Giglioni, 'Anatomist Atheist? The "Hylozoic" Foundations of Francis Glisson's Anatomical Research', in Grell and Cunningham (eds.), *Religio Medici*, pp. 115–35, on pp. 132–3, n. 57.

110 See Nigel Smith, *Perfection Proclaimed: Language and Literature in English Radical Religion 1640–1660* (Oxford, 1989), ch. 5.

111 See Wilson, 'De Ipsa Natura', pp. 159ff. On this aspect of Paracelsian ideas, see Walter Pagel, *Paracelsus* (Basel, 1958). For a reading of *Notion of Nature* which identifies the 'sect' as the 'spiritualists', and which emphasises the extent to which it was a response to a 'spiritualist' science as represented by van Helmont, see Klaaren, *Religious Origins*, p. 151 and chs. 3, 6, *passim*. It is true that there are Stoic elements in van Helmont's thought, but these do not seem to us overt enough to make the Helmontians likely to be Boyle's specific target in his 'sect' reference: see Walter Pagel, *The Religious and Philosophical Aspects of van Helmont's Science and Medicine*, *Bulletin of the History of Medicine*, Supplement no. 2 (Baltimore, 1944); id., *Joan Baptista Van Helmont: Reformer of Science and Medicine* (Cambridge, 1982), pp. 31–2 and *passim*.



he was revising the book and when it was actually published, he was ignorant of the evidence about the exact nature of the additions that Boyle made or contemplated at that point surveyed in the previous section. These indicate that Boyle's anxieties at that stage were at best tangential to the deistic/catholicising impulses that Jacob adduces in this connection.<sup>112</sup> In fact, Boyle's additions suggest that what concerned him about intellectual developments between the 1660s and c. 1680 focused particularly on the continuing vitality of anti-mechanistic philosophies of nature, and specifically medical ones. It is therefore hard to see it as coincidental that, as recent research has highlighted, the 1670s did indeed see a proliferation of neo-Aristotelian cosmologies (often promulgated by quite conservative figures) which located life and purpose within matter itself – thus reifying the concept of the vegetative soul – in direct opposition to mechanistic theories like Descartes' and Boyle's which rejected the vegetative soul and distinguished the attributes of intelligence and reason from lifeless matter.

As we shall see, there are various such figures to whose writings Boyle appears to allude, while it also seems reasonably clear who he was responding to in his views on atomism in the unpublished Postscript. But it should be stressed that the only evidence within *A Free Enquiry* as to who he was getting at consists of verbal echoes of their work. In fact, many of the people involved were either known directly to Boyle, or were intimate with friends of his. Here, therefore, more than ever, one would expect him to 'parcere nominibus', to be sparing with names.<sup>113</sup> Moreover, while we can here only briefly sketch the ideas of the thinkers involved, it should be pointed out that although Boyle took issue with what he saw as their reification of nature (or, in the case of Ralph Cudworth, his view of the mechanical philosophy), other features of their natural philosophies and theologies overlapped with Boyle's, whereas they themselves disagreed with one another as to which ideas were most intelligible and which were most theologically satisfactory. In other words, this is a reminder of the kaleidoscope of ideas that flourished in late seventeenth-century England, and a warning against seeking simple polarisations in interpreting the intellectual history of the period.<sup>114</sup>

One thinker who continued to put forward views similar to those which he had espoused in the 1660s – and which, as we have seen, may have been one of Boyle's subsidiary targets at that time – was Henry More. In 1671, More

112 Jacob, 'Boyle's Atomism', pp. 221ff., 224; *Henry Stubbe*, pp. 143ff. It is perhaps worth pointing out that, though the passages attacking the medical view of nature as purposive might seem relevant to Stubbe's views as expressed in *The Miraculous Conformist*, the manuscript material divulged here proves that these were added to Boyle's text after Stubbe's death.

113 See Davis, 'Parcere nominibus', esp. pp. 165–6.

114 See Michael Hunter, *Science and the Shape of Orthodoxy: Intellectual Change in Late Seventeenth-century Britain* (Woodbridge, 1995), pp. 11f.



published his *Enchiridion Metaphysicum*, in which he sought to deploy Boyle's experimental findings to support his idea of a 'spirit of nature', and in 1672, Boyle made public his hostility to this in his *Hydrostatical Discourse*. He there argued against More's invocation of such a principle on the grounds that such 'Mechanical Affections of matter' as the spring and weight of the air could account for phenomena 'without recourse to an Incorporeal Creature, which 'tis like the Peripateticks and divers other Philosophers may think less qualified for the Province assign'd it, than their *fuga Vacui*, whereto they ascribe an Unlimited power to execute its Functions'.<sup>115</sup> Unperturbed by this, however, More was to continue to promulgate his view of nature throughout the 1670s and 1680s, and Boyle might well have thought that a further reproof was called for.

In addition, there were new threats to preoccupy him, including various authors who attributed a direct purposiveness to nature rather than invoking an intermediate spiritual principle like More's. One of these was Sir Matthew Hale, Lord Chief Justice and virtuoso, a friend of such friends of Boyle as Richard Baxter and Gilbert Burnet (who was to write Hale's biography after his death). Hale developed a natural philosophy which was fundamentally based on that of Aristotle but developed in an increasingly Helmontian direction. It was largely predicated on hostility to Cartesian mechanism, and he saw Boyle's thesis about the spring of the air as exemplifying what he found unsatisfactory about the explanations offered by a mechanistic view of nature. In the 1670s he published two treatises attacking Boyle's ideas (he also took issue with More's idea of a spirit of nature, which he saw as virtually tautologous).<sup>116</sup> More responded to Hale at length in his *Remarks on Two Late Ingenious Discourses* (1676), in which he once again reiterated his advocacy of a spirit of nature, while a counterattack was also launched on Boyle's behalf, largely by John Wallis in his *Discourse of Gravity and Gravitation* (1675), though Boyle himself seems to have had Hale in mind in his 'Of the Causes of Attraction by Suction' which appeared in his *Tracts* of 1674.<sup>117</sup>

In 1677 Hale published his *magnum opus*, *The Primitive Origination of Mankind, Considered and Examined According to the Light of Nature*, in which many of his ideas about the natural world were drawn together.<sup>118</sup> This contained various

115 *Works*, vol. 7, pp. 183–4, and pp. 139–84 passim. See also Shapin and Schaffer, *Leviathan and the Air-Pump*, pp. 207ff., and esp. John Henry, 'Henry More versus Robert Boyle: The Spirit of Nature and the Nature of Providence', in Hutton, *Henry More*, pp. 55–76.

116 See Alan Cromartie, *Sir Matthew Hale 1609–1676: Law, Religion and Natural Philosophy* (Cambridge, 1995), part 3. Hale's and Boyle's views on law, however, overlapped in distinction to those of Hobbes: see Sargent, *Diffident Naturalist*, pp. 47–50.

117 Cromartie, *Sir Matthew Hale*, pp. 211, 214; Shapin and Schaffer, *Leviathan and the Air-pump*, pp. 222–4, though they are wrong to state categorically that Boyle did not reply: see *Works*, vol. 8, pp. 199–222, esp. p. 210. It is perhaps also worth noting that Hale's *Difficiles Nugae* was greeted with a coolness amounting to hostility in *Phil. Trans.*, 9 (1674), 78–83.

118 Cromartie, *Sir Matthew Hale*, pp. 198–9.

statements with which Boyle would have been bound to take exception, for instance Hale's view concerning natural bodies that 'the wise and powerful God hath committed the Coagmentation, Disposition, and Formation thereof to their Seminal Principles, *tanquam Vicariis & substitutis Divini Numinis Instrumentis*, as it were to Vicegerents and subservient Instruments of the Deity'. Obviously, this expresses one of the notions of nature that Boyle questioned in his treatise as a whole.<sup>119</sup>

An even more fundamental difference is seen in the two men's views of the explanatory role of natural laws. For Hale, influenced here primarily by van Helmont, there were many natural phenomena that could be explained only by saying that God had willed it to happen, according to law. Thus,

if a man should ask, how doth the stone understand that he must descend, when yet all the men in the world can never give any satisfactory reason for its motion to the earth, more than to the moon, but only nature that is the principium motus or quietus, or rather the God of nature, whose standing and statuminated law nature is, hath so ordered it, and ordered so in the best way for the use beauty and accommodation of the universe.<sup>120</sup>

These words, published in 1674 in Hale's critique of Boyle's interpretation of pneumatic phenomena, could easily be one of the things Boyle had in mind when he dictated the famous passage about the laws of nature added to section II c. 1680 (457/41–2). He was responding to the view 'that the *Nature* of this or that Body, is but *the Law of God prescrib'd to it*', which he described as 'an improper and figurative Expression', since it forestalled a proper investigation of the powers and properties placed in nature by God that actually produce the phenomena of nature. 'Besides this', Boyle added, 'to speak properly, a *Law* being but a *Notional Rule of Acting according to the declar'd Will of a Superior*, 'tis plain, that nothing but an Intellectual Being can be properly capable of receiving and acting by a *Law*'. Boyle was not denying that natural laws exist – his works are replete with references to the laws of nature, and his concept of them was no less voluntaristic than Hale's – he was simply pointing out the shallowness of explanations that stopped at the level of laws, without inquiring into causal mechanisms.

In passing, it is worth noting that it may have been partly because of Hale's use of van Helmont's writings that in two passages written c. 1680 Boyle added disapproving references to van Helmont by name, particularly his idea that the laws of nature emanated from God and were 'obeyed' by matter. In Boyle's words, '*Helmont* ... will have every Body ... to act that which 'tis commanded

119 Hale, *Primitive Origination* (London, 1677), p. 27. Guido Giglioni called this passage to our attention.

120 Matthew Hale, *Difficiles Nugae, or Observations Concerning the Torricellian Experiment* (London, 1674), p. 238, quoted in Cromartie, *Sir Matthew Hale*, pp. 216–17.

to act', whereas, for Boyle, inanimate matter was incapable of obeying laws.<sup>121</sup> The way in which van Helmont had been taken up by thinkers like Hale may have made Boyle feel it necessary to confront his views more explicitly than had been the case in the 1660s.

An even more significant development of the 1670s occurred in the medical sphere, building on the influential example of William Harvey. Harvey's work on epigenesis had led him to conclude that life and function exist even at the level of 'inorganic' (formless) matter, in that the body grows and is nourished before any organs have formed and the activity associated with the soul is produced by the blood. In his view, since vegetative activity precedes the appearance of the soul, matter itself must possess a primitive ability to perceive. Furthermore, all of this is guided by a teleology that points to a divine principle within nature, whatever we call it: 'Nor do I think that we are greatly to dispute about the name by which this first agent is to be called or worshipped; whether it be God, Nature, or the Soul of the Universe, – whatever the name employed, – all still intend by it that which is the beginning and end of things.'<sup>122</sup>

Harvey's ideas were developed particularly by one of his leading disciples, the physiologist Francis Glisson, Regius Professor of Physic at Cambridge, a prominent Fellow of the College of Physicians who was also a slightly active Fellow of the Royal Society. Glisson's research focused on the 'irritability' of tissues, a concept derived from Aristotle, Galen and Harvey which he used in his treatises on the liver and digestive tract to explain how muscle fibres contract (such as how the heart contracts in response to its stretching in diastole) and how glands secrete fluids (such as how the gall bladder releases bile when it is 'irritated' by overfilling and how the stomach digests food).<sup>123</sup> He provided a metaphysical basis for this attribute of living tissue in a dense Latin work called *Treatise on the Energetic Nature of Substance, or on the Life of Nature* (1672), described by John Henry as 'one of the most original systems of philosophy to appear in the second half of the seventeenth

121 *Works*, vol. 10, pp. 456–7. Cf. *ibid.*, p. 549. See also Antonio Clericuzio, 'From Van Helmont to Boyle: A Study of the Transmission of Helmontian Chemical and Medical Theories in Seventeenth-century England', *British Journal for the History of Science*, 26 (1993), 303–34, on p. 331.

122 Harvey, *De generatione animalium* (1651), cited in Giglioni, "'Hylozoic" Foundations', from which this account has been derived. See also R. French, *William Harvey's Natural Philosophy* (Cambridge, 1994), esp. ch. 10.

123 See Oswei Temkin, 'The Classical Roots of Glisson's Doctrine of Irritability', *Bulletin of the History of Medicine*, 38 (1964), 297–328. See also Walter Pagel, 'Harvey and Glisson on Irritability, with a Note on van Helmont', *Bulletin of the History of Medicine*, 41 (1967), 497–514, and *id.*, 'The Reaction to Aristotle in Seventeenth-century Biological Thought: Campanella, van Helmont, Glanvill, Charleton, Harvey, Glisson, Descartes', in E.A. Underwood (ed.), *Science, Medicine and History* (2 vols., London, 1953), vol. 1, pp. 489–509.



century'; Guido Giglioni has since painstakingly analysed its content and significance.<sup>124</sup>

In this work, Glisson made a kind of 'life' an essential attribute of all matter, whether living or non-living, organised or undifferentiated. 'Primeval life' (*vita primaeva*) and 'prime matter' (*materia prima*) together constitute the essence of the incorruptible 'living substance' (*biouisia*) of which all things are made, capable of perception (*perceptio*, a notion similar to Helmont's *archaeus*), desire (*appetitio*), and motion (*motus*). Natural perception is responsible for shaping the parts of plants and animals, and is the basis of nature's ability to heal itself, for nature acts intentionally: 'Is Nature so far fortuitous that it begins a new operation of its own accord without any purpose to itself? or does it rather manage all things wisely and not without admirable providence?' Answering his own question, Glisson wrote: 'I am unable to conceive how it happens that motion arises purely from an internal principle, yet that principle neither desires nor perceives.'<sup>125</sup> Thus, Glisson was simultaneously a teleologist, a materialist and a vitalist: plants and animals differ from other things because of their higher level of organisation, which enhances the attributes of living substance to become vegetative and sensitive souls, not because of the presence in them of life or vital matter, which is found in all things.

Glisson's idea of living matter was virulently attacked by Henry More in *Ad. V. C. epistola altera*, a diatribe mainly directed at Spinoza which was published in the 1679 Latin edition of More's works. More thought Glisson had removed providence from God and placed it within nature, an act tantamount in More's opinion to atheism: 'Only those who deny God and all incorporeal substance; strive to seek the origin of motion and all life which gleams in the universe in matter itself.' Against Glisson's active matter, More maintained that the coherence of matter and motion was maintained not by a principle of life within matter, but by More's own 'Spirit of Nature which holds together and actuates the whole material world'.<sup>126</sup> On the other hand, as Boyle might have felt, the distinction could well be seen as one in name only, as the quotation above from Harvey suggests – indeed, at one point More confessed that, if Glisson 'had put for "Nature" the "Spirit of Nature" that would have been enough for us to agree'.<sup>127</sup> On the other hand, Glisson's ideas were enthusiastically endorsed by a friend of both Boyle and Glisson, the

124 John Henry, 'Medicine and Pneumatology: Henry More, Richard Baxter and Francis Glisson's *Treatise on the Energetic Nature of Substance*', *Medical History*, 31 (1987), 15–40, on p. 16; Giglioni, '"Hylozoic" Foundations'; id., 'Automata Compared'; id., 'Panpsychism versus Hylozoism: An Interpretation of some Seventeenth-century Doctrines of Universal Animation', *Acta Comeniana*, 11 (1995), 25–45.

125 Henry, 'Medicine and Pneumatology', p. 31 and n. 63.

126 Ibid., pp. 28–32.

127 Ibid., p. 32 n. 68.



nonconformist divine Richard Baxter,<sup>128</sup> who expressed these views in a letter to Henry More of 1681 that was published the next year – the same year in which Boyle wrote the preface to *A Free Enquiry* – as part of his discourse *Of the Nature of Spirits*. Baxter, a theological voluntarist, did not agree with More's conclusion concerning Glisson. He could see no reason to deny that God's absolute power was capable of making 'perceptive living Matter', seeing no contradiction between the concepts involved.<sup>129</sup>

What about Boyle's own view of Glisson? One clue is provided by the review of the *Treatise on the Energetic Nature of Substance* that appeared in *Philosophical Transactions*, almost certainly written by Boyle's confidant Henry Oldenburg, which was somewhat critical. It canvassed the alternative view 'that these general notions are too soon brought upon the Stage, and that *Particular* Forms are to be found out first, and thence we are to rise to the *Universal*'; it is revealing that it also vindicates Boylean arguments in favour of a vacuum against Glisson's plenist claims.<sup>130</sup>

Glisson is not named in *A Free Inquiry* – hardly surprisingly, in view of what has already been said about Boyle's practice in such matters – but John Henry has found a passage that certainly appears to make a direct reference to Glisson's active matter.<sup>131</sup> It is found in section VII (527/268), where Boyle begins to consider the first of the several axioms about nature that he objects to, 'that which pronounces, that *Omnis Natura est conservatrix sui*, where, by the Word *Nature*, I suppose, they understand a Natural Body, for otherwise I know not what they meant'. Boyle sees two possible interpretations of this axiom: it may mean simply that no body destroys itself; or, it may mean 'that in every Body there is a Principle call'd *Nature*, upon whose Score, the Body is vigilant and industrious to preserve Its Natural State, and to defend Itself from the Violence and Attempts of all other Bodies that oppugn It, or endeavour to destroy or harm It'. If understood in the former sense,

the Axiom may be admitted, without any prejudice to our Doctrine. For since according to our *Hypothesis*, Inanimate Bodies can have neither Appetites, nor Hatreds, nor Designs, which are all of them Affections, not of Bruit Matter but of Intelligent Beings; I, that think Inanimate Bodies have no Appetites at all, may easily grant, that they have not any to destroy themselves.

Understood in the latter sense, however, the proposed axiom 'will import, that every Body has within itself a Principle, whereby it does desire, and with all its

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128 Both Glisson and Baxter were present at the death of Sir Matthew Hale, which Baxter described in *Additional Notes on the Life and Death of Sir Matthew Hale* (1682): see Henry, 'Medicine and Pneumatology', p. 38n.

129 Ibid., p. 36.

130 *Phil. Trans.*, 7 (1672), 5076–7. For a more favourable review of another work by Glisson, his *De Ventriculo*, see ibid., 11 (1676), 705–8.

131 Henry, 'Medicine and Pneumatology', p. 39 n. 99.

Power endeavour, to compass its own Preservation', which was equivalent to the vulgar notion of nature that Boyle opposed. If this passage was written specifically in response to Glisson – and we agree with Henry that this seems very likely – then it must date from c. 1680, but there is unfortunately no manuscript evidence to prove this.

Otherwise, we have not identified any specific references to Glisson in *A Free Inquiry*. However, the whole tenor of Boyle's comments about medical versions of the vulgar notion of nature – most of which were composed c. 1680 – would seem to have had in mind the more general tradition of Galenic and Hippocratic medicine from which Glisson emanated, in which a view of nature as purposive was prevalent. An example of this was the belief in 'crises' – in other words the Galenic doctrine that there were turning points in acute diseases, which Boyle clearly saw as of key importance – and to which (as we have seen) he therefore devoted a lengthy new passage in the book at this time, along with another on the more general medical notion that '*Natura est Morborum Medicatrix*' (537/302).

To find a topical example of such usage in a medical book, one ironically need look no further than Boyle's own neighbour in Pall Mall, Thomas Sydenham, who, in his dedication to Boyle of his earlier *Methodus Curandi Febres* (1666), had stated that he had undertaken the subject at Boyle's behest, and that Boyle had visited patients with him.<sup>132</sup> In 1676, Sydenham published his important *Observationes Medicae*, and it has been pointed out that in this work 'an apparently personified Nature occupies a position of central importance'. Indeed, Sydenham's comments on how nature 'strives with might and main to restore the health of the patient by the elimination of morbid matter' could almost have inspired Boyle's remarks on this subject in section VI.<sup>133</sup>

Though Sydenham well exemplified Boyle's concern, however, there is no reason to think that he (or anyone else) was Boyle's specific target. Throughout his career as a natural philosopher, Boyle was profoundly interested in medicine, developing strong and somewhat critical views about both its theory and practice. Though his published works on such topics mainly limited themselves to the medical spin-offs of his more general scientific programme, he also planned a work (ultimately suppressed) which would have been overtly critical of orthodox medical practice in a way that his published works were

132 Fulton, *Bibliography*, p. 161. See also the letter from Sydenham to Boyle printed in K. Dewhurst, *Dr Thomas Sydenham: His Life and Original Writings* (London, 1966), pp. 162–4 (also in *Correspondence*, vol. 4, pp. 55–7).

133 See Rather, 'Pathology in Mid-Century', pp. 90–2, where Rather also notes the extent to which Sydenham qualified these views 'as if he had suddenly heard the admonitory voice of Robert Boyle'. It is perhaps worth pointing out that Max Neuburger, and through him J.F. Fulton, wholly misconstrue Boyle's views on the *vis medicatrix naturæ*, seeing him as in favour of it rather than hostile to it: M. Neuburger, 'Boyle's Erklärungsversuch der spezifischen Arzneimittelwirkung', *Archeion*, 12 (1930), 5–12, cited in Fulton, *Bibliography*, p. 113.

not: this was to have been entitled ‘Some Considerations & Doubts about the Vulgar Method or Practice of Physick’, and he worked on it between the 1660s and c. 1680.<sup>134</sup> The suppressed work was concerned more with the efficacy than the rationale of the ‘Vulgar Method of Physick’, and the synopses of its content and fragments of its text that survive do not overlap with the subject matter of *A Free Enquiry*. On the other hand, apart from the fact that both it and the most extensive sections added to the *Free Enquiry* c. 1680 display a preoccupation with the commonplaces of the medicine of the day, the suppressed work displays two significant features in relation to the treatise here being analysed. One is the use of the word ‘vulgar’ in the title: although, as we have seen, Boyle so described the concept of nature of which he disapproved in the text of his *Usefulness of Natural Philosophy* (1663), it does not appear in the versions of the title of the *Free Enquiry* that appear in the 1660s lists of Boyle’s writings.<sup>135</sup> It may not be coincidental that the word was transferred c. 1680 from the title of a work that Boyle at that point resolved to suppress to one that he revised for publication. It is also worth noting a characteristic of the extant section of text of ‘Some Considerations & Doubts’, which argues that the received method of physic was less safe than its practitioners claimed. This has a markedly ironic tone that is otherwise not common in Boyle’s writings, and an echo of it may be discerned in the passages concerning the ineffectiveness of nature in a medical context which Boyle added to *A Free Enquiry* c. 1680; such a tone is not paralleled elsewhere in the work. It therefore seems possible that the two works are linked, and it is even possible that the suppression of the other work was linked to the addition of medical sections to the *Free Enquiry*, in that, having decided to take issue with this facet of orthodox medical doctrine, Boyle may have been disinclined to pursue his critique of its practical dimension as well.

Lastly, we come to yet another book that had recently appeared when Boyle began to revise his *Free Enquiry: The True Intellectual System of the Universe* (1678), an assault on ‘atheism’ by the Cambridge Platonist Ralph Cudworth.<sup>136</sup> This is relevant partly because it provided a restatement of the idea of a ‘spirit of nature’ which Cudworth’s close colleague, Henry More, had so long advocated and which Boyle saw as one of the reifications of nature with which he disagreed, and partly because Boyle’s comments on the mechanical philosophy in his unpublished Postscript appear to be a response to Cudworth’s strictures

134 See Michael Hunter, ‘Boyle versus the Galenists: A Suppressed Critique of Seventeenth-century Medical Practice and its Significance’, *Medical History*, 47 (1997), 322–61, reprinted in *Scrupulosity and Science*, pp. 157–201.

135 See above, p. 224.

136 For studies of Cudworth see R.L. Colie, *Light and Enlightenment* (Cambridge, 1957), ch. 5; Arrigo Pacchi, *Cartesio in Inghilterra da More a Boyle* (Rome and Bari, 1973), esp. pp. 176ff.; Hutchison, ‘Supernaturalism’, pp. 319ff.; and Richard Olson, ‘On the Nature of God’s Existence, Wisdom and Power’, in Frederick Burwick (ed.), *Approaches to Organic Form* (Dordrecht, 1987), pp. 1–48, esp. pp. 20–6.



on the subject in his book. It is therefore necessary to go into the latter at length.

In the course of his book, Cudworth wrote at length about atomism, one of his major goals being to dissociate atomism properly understood from atheism by showing that it 'was no Invention of *Democritus* nor *Leucippus*, but of much greater *Antiquity*', deriving ultimately from the primeval '*Moschus* a *Phoenician*', widely identified with the biblical Moses.<sup>137</sup> Hence the reformulation of it in an atheistic mode by Democritus and Leucippus, which had been so influential both in antiquity and since, was in fact a perversion of the true, original, theistic version that Moschus had championed.<sup>138</sup> (After 'Moschus', Cudworth had nothing positive to say about any ancient atomist except Anaxagoras, whom he briefly praised for his reliance on mind apart from matter as a fundamental principle, without which nature could not be explained.<sup>139</sup>) In subsequent sections of the book, Cudworth went on to deal at length with other forms of atheism than the atomistic variety, including that which he called 'Hylozoick', which he associated with the Greek philosopher Strato, though he almost certainly had Glisson in mind as an example of it.<sup>140</sup>

Here, it is Cudworth's characterisation of modern atomism that concerns us, because, when he came to speak of its revival, he perceived only two varieties, 'the *Adulterated Atheistick Atomology*, called *Leucippean* or *Democritical*' – no names are mentioned, but clearly he had Hobbes in mind – and the ancient '*Moschical* (or if you will *Mosaical*) and *Pythagorical*' form, which he associated with Descartes, except that Descartes' philosophy had deviated from the original because, 'in rejecting all *Plastick Nature*, it derives the whole System of the Corporeal Universe, from the *Necessary Motion of Matter*, ... without the Guidance or Direction of any *Understanding Nature*'.<sup>141</sup> Cudworth went on to propose a kind of atomism that went beyond the standard dualism of 'stupid', inert matter and conscious minds, by adding to these the '*General Plastick Nature* of the Universe' and various '*Particular Plastick Powers* in the *Souls of Animals*', both of which were unconscious but nevertheless capable of purposeful action for good ends.<sup>142</sup> As he saw it, there were only two alternatives to this, both of them unacceptable: that everything happens '*Fortuitously*, and happens to be as it is, without the Guidance and Direction of any *Mind* or *Understanding*; Or else, that God himself doth all *Immediately*, and as it were with his own Hands, Form the Body of every

137 Cudworth, *True Intellectual System* (London, 1678), sig. \*2. On this reading of the history of atomism, see D.B. Sailor, 'Moses and Atomism', *Journal of the History of Ideas*, 25 (1964), 3–16, and J.E. McGuire and P.M. Rattansi, 'Newton and the "Pipes of Pan"', *NRRS*, 21 (1966), 108–43.

138 Cudworth, *True Intellectual System*, sig. \*2, p. 13.

139 See below, pp. 268–9.

140 See Pacchi, *Cartesio in Inghilterra*, pp. 152–3. See also Henry, 'Medicine and Pneumatology', and Giglioni, "'Hylozoic Foundations'".

141 Cudworth, *True Intellectual System*, pp. 174–5.

142 Ibid., pp. 171–2.



Gnat and Fly, Insect and Mite'.<sup>143</sup> He felt that there could be no question about the preferability of the notion of 'an Inferior and Subordinate Instrument' under God, which 'doth Drudgingly Execute that Part of his Providence, which consists in the Regular and Orderly Motion of Matter'.<sup>144</sup>

Boyle seems to have been alluding to Cudworth's bipartite division of atomism when he proposed in the Postscript his own tripartite scheme. As we saw above (under 'The Treatise's Component Parts'), having distinguished between atomists who followed 'Leucippus & Democritus' and a group who are clearly to be identified as the Cartesians, Boyle went on to identify a further group among whom he numbered himself which he called 'Anaxagoreans'. The use of the identical distinction employed by Cudworth suggests that the *True Intellectual System* was one of Boyle's targets here. That it was a figure like Cudworth with whom he was disagreeing is suggested by his initial 'premise' in the Postscript that 'I have so much respect & kindness for some of the persons I am in this paper to oppose that I forbore expressly to name them (tho' tis like that by the mention of their opinions & arguments you will guess who they are)'.<sup>145</sup> If this is the case, then Cudworth appears to have inspired a significant statement of Boyle's position on the history of atomism.

In the Postscript, Boyle drew on ideas that he had expressed earlier. Thus, though he was more cautious than Cudworth about Moses' role as the author of atomism, he also had connected atomism explicitly with Moschus the Phoenician at least three times, in works published as early as 1661, nearly twenty years before *The True Intellectual System* appeared.<sup>146</sup> Nor was it novel for him to associate his type of mechanical philosophy with Anaxagoras. Boyle had made a similar point in his 'Requisite Digression' in Part 1 of *The Usefulness of Natural Philosophy*, written in the 1650s: 'I finde that *Anaxagoras*, though he believed, as *Aristotle* did after him, that Matter was Eternal, yet he discern'd that the notion of Matter not necessarily including motion, there was a necessity of taking in a *Mens*, as he stiles God, to set this sluggish Matter a moving'.<sup>147</sup> The new element – which was clearly an afterthought, as it was added in the margin of the manuscript version as an insertion during revision – was Boyle's use of the term 'Anaxagorean' as a label to help define this group of mechanical philosophers. Coming as it does immediately after Boyle's invocation of a bipartite scheme identical with Cudworth's, it certainly appears to have been written with Cudworth in mind, even though Boyle gave a different meaning to the term from the one that Cudworth had.

143 Ibid., p. 147.

144 Ibid., p. 150.

145 147/fol. 186. Cudworth was on friendly terms with Boyle, in spite of their philosophical differences: the two surviving letters from him to Boyle are both cordial and respectful: see *Correspondence*, vol. 2, pp. 276–7; vol. 6, pp. 48–9.

146 See *Certain Physiological Essays* (1661), in *Works*, vol. 2, p. 87; *The Sceptical Chymist* (1661), *ibid.*, p. 260; and *The Excellency of Theology* (1674), *ibid.*, vol. 8, p. 74.

147 *Works*, vol. 3, p. 252.

Anaxagoras had in fact been hard for Cudworth to categorise. He called him a 'Spurious Atomist' because his unlimited types of atoms were associated not only with matter and motion (as other atomists theorised), but also with forms and qualities, so that 'there was indeed a wide difference betwixt his Philosophy and the Atomical'. For Cudworth, 'the *Anaxagorean Hypothesis*', involving the idea that atoms have properties other than purely mechanical, was thus disqualified from being genuinely atomistic.<sup>148</sup> At the same time, Cudworth praised Anaxagoras' reliance on mind as a fundamental principle, just as Boyle did in the Postscript. Citing Aristotle's 'Commendation of *Anaxagoras*, as the first of the Ionick Philosophers, who introduced *Mind* or *Intellect* for a Principle in the Universe', Cudworth added 'that in this respect, he alone seemed to be sober and in his wits, comparatively with those others that went before him, who talked so idly and Atheistically'.<sup>149</sup> Yet Cudworth did not take this aspect of Anaxagoras' thought as its defining characteristic, even though it would have fitted well into his overall programme of baptising atomism.

It was Boyle who emphasised this aspect of Anaxagorean atomism, giving Anaxagoras an honoured place in his own sanitised history of atomism and reverting to an echo of his own earlier usage in deploying ancient exemplars to urge greater discernment on interpreters of atomism. In Boyle's opinion, Cudworth and others had overlooked the existence of a variety of atomism, represented historically by Anaxagoras and in their own time by Boyle himself, in which divine wisdom was crucial to the original formation of all things. Interestingly, this is further echoed in the other suppressed document cited under 'The Treatise's Component Parts', BP 18, fols. 115–16, in which, rejecting the idea of a plastic nature, Boyle wrote: 'I see not how it gives a more rationall account of the Phænomena of the universe, then the Anaxagorean Mechanicall Philosophy can give without it', an implicit appeal to Ockham's razor to show the superiority of his own approach.

Cudworth was thus almost certainly one of the recent authors whom Boyle had in mind in his Postscript and other documents written at this time. But he was not the only one, for Boyle there speaks of the recent critics of the mechanical philosophy he intended to deal with in the plural – 'the learned men I have been speaking of & others of the same mind ... our learned Censurers of the new Philosophy as they call it' – specifically stating that 'some are more Moderate then others'.<sup>150</sup> Even if Cudworth may have been the most sophisticated of the critics Boyle felt the need to confront, then, there were also others. Who else might Boyle have been thinking of? It is relevant that

148 Cudworth, *True Intellectual System*, pp. 26, 16, 35; cf. p. 32.

149 Ibid., p. 112. Cf. p. 124.

150 147, 151, 153/BP 7, fols. 186, 189v, 190v. It is odd that on 148/fol. 187 Boyle speaks of 'the learned Men I have been speaking of' in connection with an opinion that is almost certainly Cudworth's, which may suggest that Boyle subconsciously conflated his general and specific antagonists: cf. Hunter, *Robert Boyle Reconsidered*, pp. 12–13.

Boyle seems to have seen these ‘Censurers’ as clergymen, excusing them on the grounds of a zeal against atheism which is ‘so becomeing the profession most of them are of’.<sup>151</sup> A clue to their identity is provided by a letter that Boyle wrote to the divine and F.R.S. Thomas Smith in December 1675.<sup>152</sup> In it, he complimented Smith on his recent sermon on ‘the Credibility of the Mysteries of the Christian Religion’, noting: ‘the virtuosi will I hope easily take notice of your discreet moderation in declineing the opportunity that would have mislead a less ingenious person to fall foul upon Philosophy, which many thinke it, tho erroneously enough, a great service to Christianity to decry’. His concern becomes easy to understand if one scrutinises the sermon literature of the period, since divines often expressed hostility to the overvaluation of reason in religion, in some cases explicitly associating such attitudes with natural philosophy. For instance, in a sermon before King Charles II in 1675, the Cambridge divine Miles Barne, in deprecating the ‘sceptical Genius’ of the men of the age, thought it appropriate to ‘urge the Authority of my Lord Bacon, whose, if any, me thinks should be admitted by these *Virtuosi in Religion*’.<sup>153</sup>

Why, finally, was the Postscript suppressed? One possibility takes us back to our discussion of Boyle’s attitude to controversy at the opening of this section. On reflection, Boyle might have thought better of disagreeing with an ally in the fight against atheism – particularly if, as Keith Hutchison has argued, Cudworth’s principal target, like Boyle’s, was Aristotelian naturalism rather than Hobbesian materialism, as has often been thought.<sup>154</sup> In addition, Boyle may have felt that he had made rather a meal of a relatively small part of Cudworth’s argument, entirely ignoring his learned and valuable contribution on topics other than varieties of atomism. On the other hand, it could be argued that Cudworth is so circuitously referred to that Boyle need hardly have worried about breaking ranks with an ally. Moreover, if Boyle really thought it important to differentiate between varieties of atomism, there was no reason why he should not have done so.

Perhaps a likelier reason is that Boyle may have decided that he had allowed himself to be sidetracked into an argument – namely the defence of the mechanical philosophy – that was close to his heart but was irrelevant to the attack on naturalism that formed the main argument of his book. (It is

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151 155/BP 7, fol. 193.

152 Quoted in Michael Hunter, *Science and Society in Restoration England* (Cambridge, 1981), p. 175. Cf., however, Boyle’s own sentiments in his preface to *The Excellency of Theology* (1674), *Works*, vol. 8, pp. 8–9.

153 Barne, *A Sermon Preached before the King at White-Hall, October 17 1675* (London, 1675), pp. 21–3. Cf. Hunter, *Science and Society*, pp. 173–5; John Gascoigne, *Cambridge in the Age of the Enlightenment* (Cambridge, 1989), pp. 45–6.

154 Hutchison, ‘Supernaturalism’, pp. 322–4. It is perhaps worth noting that the *True Intellectual System* was favourably reviewed in *Phil. Trans.*, 12 (1678), 936–41; on p. 937 there is a passing reference to Anaxagoras as among ‘the best of the Ancients’.



interesting that he had annexed a comparable appendage to a book published earlier in the 1670s, his *Excellency of Theology*, to the content of which the Postscript bears some resemblance.<sup>155</sup>) On reflection, he perhaps felt that the arguments in the Postscript were not entirely to the point. *A Free Inquiry* is not about licit and illicit forms of atomism, the subject of the Postscript; rather it is, when read with the *Disquisition about Final Causes*, part of a larger inquiry into the proper domain and function of teleological thinking in natural philosophy.

Yet another possibility, however, is a more banal one: Boyle may simply have lost the text. In the preface to 'An Experimental Discourse of Some Unheeded Causes of the Insalubrity and Salubrity of the Air', part of *An Essay of the Great Effects of Even Languid and Unheeded Motion* (1685), Boyle lamented the loss of two manuscripts, one of them 'a defence of the Mechanical way of Philosophizing about Natural Things, as it respects Religion'.<sup>156</sup> This could easily describe the fragment that survives today in the Boyle Papers, and Boyle may have failed to publish the Postscript simply because he had mislaid it at the time when *A Free Enquiry* went to press.

## Conclusion

This study has, we hope, been exemplary of what can be learned from concentrated scrutiny of Boyle's extensive surviving manuscripts about the making of one of his major published works. Moreover, it may be argued that such detailed analysis has important implications for our understanding of Boyle as an author and polemicist more generally.

First, in the section 'Boyle's Method of Composition', the survival of extensive manuscript versions of parts of *A Free Enquiry* provided an opportunity to reconsider Boyle's method of composition as a whole, drawing attention to significant stages in its evolution in the course of his career which have hitherto been overlooked. In particular, it was possible to contextualise the manuscript versions of *A Free Enquiry* by invoking manuscript material from an earlier, key period in the evolution of Boyle's intellectual career, the late 1650s. It was evidently then that Boyle adopted the method of composition in the form of separate sections that he used in the *Free Enquiry* and other writings of the decades in which it originated; this method provided flexibility though at the same time storing up potential problems of document management when Boyle returned to such compositions after putting them to one side for some years. If this enables us to look afresh at the macrostructure of Boyle's works, equally important is what the surviving manuscripts reveal

155 'About the Excellency and Grounds of the Mechanical Hypothesis', *Works*, vol. 8, pp. 99–116.

156 *Works*, vol. 10, p. 306.



about their microstructure, in terms of Boyle's method of composing his books by dictating them to amanuenses. This, too, is analysed and its implications assessed; the result is that light is thrown on how Boyle drafted and revised the prose that is characteristic of his mature years. It is hoped that such more detailed understanding of how Boyle's works were actually constructed will lead to fruitful insights on the part of other scholars studying Boyle's writings from other points of view.

Secondly, as 'The Treatise's Component Parts' indicates, knowledge of when certain sections of the work were composed gives key pointers to the way in which the book's argument evolved and was modified, particularly between Boyle's initial bout of work on it in the 1660s and his extensive revisions c. 1680. The implication of this is equally important, since – as the succeeding section, 'Boyle's Preoccupations and Antagonists', indicates – this ability to pinpoint which sections of the work originated when makes it possible to give the work a much more exact context than has hitherto been appreciated in terms of the currents of ideas at the time. One of the problems about interpreting Boyle's works is that there has often been a tendency to see them as timeless, loftily transcending their seventeenth-century milieu, a tendency encouraged by Boyle's habitual evasiveness in alluding to contemporaries with whose views he disagreed. Yet – though a cautionary tale is offered by J.R. Jacob's erroneous account of Boyle's aim in the book – it is possible through careful scrutiny to link the *Free Enquiry* with contemporary debates. We would compare our findings with those of Jan Wojcik in her analysis of the context of Boyle's *Discourse of Things above Reason* (1681), where knowledge of the work's setting similarly adds to our appreciation of it.<sup>157</sup> In the case of the *Free Enquiry*, our close reading has both clarified the nature of Boyle's targets when he initially wrote the work in the 1660s, and offered new clues as to just what his anxieties were about 'what has since been done in the Commonwealth of Learning' when he came to revise it c. 1680. This should illustrate how much potential there is for intensive study of the relationship between Boyle's writings and their context.

Hence this study has significant broader implications. Above all, however, we hope that we will have altered perceptions of *A Free Enquiry* itself. This has long been rightly acknowledged as one of Boyle's most important works, and has accordingly attracted a significant amount of attention. But future interpretations of it should be transformed by the ability to incorporate the fuller view which we have provided of how the book actually took shape.

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157 See J.W. Wojcik, 'The Theological Context of Boyle's *Things above Reason*', in Hunter, *Robert Boyle Reconsidered*, pp. 139–55.

Manuscript Material Relating to *Notion of Nature*

<i>MS location</i>	<i>Identity and nature of MS; comments</i>	<i>Hand(s) of MS</i>	<i>Approximate date of MS</i>	<i>Location in first edition</i>	<i>Location in Works, vol. 10</i>
BP 2, fols. 187–9	On ‘art’ as a similar reification to ‘nature’: probably intended for publication in this work. Endorsed ‘Transcribed by Robin’, in Boyle’s hand. Printed in <i>Works</i> , vol. 14, pp. 158ff.	B	c. 1680		
BP 2, fol. 190	MS version of section VI, paragraph 33. Continuation of document in BP 18, fols. 103–4.	C	c. 1680	224–5	512–13
BP 7, fols. 186–93	Unpublished ‘Post-Script’, endorsed ‘The 1 Section’. Printed in <i>Works</i> , vol. 14, pp. 147ff.	B, addns by C	c. 1680		
BP 8, fols. 149–52	MS version of section V, arguments 1–3. Same as BP 10, fols. 103–6, but this is a later copy. Originally intended to be section ‘III’; Boyle changed this to ‘IIII’, which is printed with that numeration but headed ‘Section V’. Also, the ‘IIII’ arguments he had intended to include were expanded to ‘five’ in the printed text. Some changes of wording when printed. MS ending printed only in Latin edition.	K, with slight changes in another hand (151)	1660s	121–31	483–7
BP 10, fols. 103–6	MS version of section V, arguments 1–3. Same as BP 8, fols. 149–52, but this is the earlier copy. Neither copy identical with printed text.	F, addns by E	1660s	121–31	483–7
BP 18, fols. 103–4	MS version of section VI, paragraphs 28–32, slightly reworded. Endorsed ‘About Crises’. Continued on BP 2, fol. 190.	C	c. 1680	219–24	511–12

<i>MS location</i>	<i>Identity and nature of MS; comments</i>	<i>Hand(s) of MS</i>	<i>Approximate date of MS</i>	<i>Location in first edition</i>	<i>Location in Works, vol. 10</i>
BP 18, fols. 107–8, followed by 105, 106, 109	MS version of section VII, axiom VI, paragraphs 8–16, most of paragraph 18. Begins mid-sentence on fol. 107, subsequent leaves misbound as shown at left. Lacuna on pp. 329–30 in first edition matches passage omitted in Latin editions. Some additional material inserted later, including passage from MS 199, fol. 50.	B, corr. by Boyle?	c. 1680	319–36, 338–40, with lacuna on 329–30	542–8, 549, with lacuna on 545–6
BP 18, fols. 110–11	MS version of section VI, paragraph 36, with material deleted.	A	c. 1680	230–5	514–16
BP 18, fol. 114	MS version of end of section II.	C	c. 1680	39–43	456–8
BP 18, fols. 115–16	Unpublished; on Boyle’s inability to see the advantages to religion of the vulgar notion of nature. Printed in <i>Works</i> , vol. 14, pp. 155ff.	C (115), B (116)	c. 1680		
BP 18, fols. 118, 117–112, and 112–13	Fol. 118 is clean copy of most of 117; top of 117 and 118 partly printed in section IV, paragraph 7; the very end of both is printed in section IV, paragraphs 9–10. Lower half of fol. 117v and top half of 112 (which follows continuously) is printed as paragraph 8 in same section. Lower half of fol. 112 and all of 113 are not printed; they are printed in <i>Works</i> , vol. 14, pp. 160–1.	B, corr. by Boyle?; C on bottom of 117v and most of 112r	c. 1680	62–8	464–8
BP 18, fol. 119	Unpublished; overlaps with part of section IV (p. 478) where Boyle discusses heathen belief in the soul of the world. A passage from Seneca quoted at length in the printed text is cited briefly in the MS Printed in <i>Works</i> , vol. 14, pp. 161–2.	B, with last few words by Boyle	c. 1680		
BP 29, fols. 219–48	Unpublished Latin translation of most of section I, and arguments 1–3 in section V (wrongly labelled ‘IV’ on MS). Contains one sentence found (though worded differently) in printed Latin editions, but not in English edition.	L	1680s	1–23; 121–31	445–51; 483–7

<i>MS location</i>	<i>Identity and nature of MS; comments</i>	<i>Hand(s) of MS</i>	<i>Approximate date of MS</i>	<i>Location in first edition</i>	<i>Location in Works, vol. 10</i>
BP 36, fol. 22	Clean copy of opening page of ‘Post-Script’.	Bacon	c. 1680		
BP 36, fol. 29	List of scientific phenomena to remember, at least one (on aperitive faculty of a key) mentioned in this work. Sheet torn out of a notebook.	Bacon	1680s?		
BP 41, fols. 68–9	MS of laudatory poem by ‘S.F., an English noblewoman’, published in the Latin edition (London, 1687) translated by David Abercromby.	M	c. 1686–7		577–81
BP 44, fols. 51–4	‘Annotationes In Aristotelicam naturae definitionem’, comments (in Latin) on section IV of the published treatise, taking exception to Boyle’s interpretation of Aristotelian axioms; by an anonymous French Aristotelian.	?	1686–91		
BP 46, fols. 3–5	Superseded version of section VI (on crises). Just two sentences printed; the rest was rewritten. Probably loose leaves from a notebook. Printed in <i>Works</i> , vol. 14, pp. 162–3.	B	c. 1680	219	511
MS 190, fol. 6	(recto:) Draft of ‘Advertisement’, hastily written after Boyle has seen printed sheets for most of the book; several changes prior to publication. Printed above, p. 238. (verso:) Draft of transitional paragraph on vacuums at end of section VII, axiom IV.	Greg	mid 1680s	a5; 289	443; 533
MS 198, fols. 3–8	Draft of section VII, axiom VI, paragraphs 1–3 and most of 7, with some material deleted (incl. parenthetical paragraphs on 5v and 6r), some material added later. Lacuna on pp. 307–8 in first edition matches passage omitted in Latin editions. Continued in MS 199, fols. 147–9.	Greg	c. 1680	302–10, 316–17; with lacuna on 307–8	537–40; 541–2; with lacuna on 539



<i>MS location</i>	<i>Identity and nature of MS; comments</i>	<i>Hand(s) of MS</i>	<i>Approximate date of MS</i>	<i>Location in first edition</i>	<i>Location in Works, vol. 10</i>
MS 199, fols. 147–9v	Draft of section VII, axiom VI, paragraph 4 to start of paragraph 7. Ends abruptly on 147v. Continuation of MS 198, fols. 3–8.	Greg	c. 1680	310–16	540–1
MS 199, fol. 150	Draft of section VII, axiom VI, paragraph 17, interspersed with material on BP 18, fols. 106 and 109. Contains lacuna that matches passage omitted in Latin editions.	Greg	c. 1680	336–8	548–9

CATALOGUE OF  
THE BOYLE PAPERS,  
LETTERS,  
NOTEBOOKS  
AND ASSOCIATED  
MANUSCRIPTS



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# Introduction to the Catalogue

## General

The Boyle archive comprises seventy-four volumes, divided into three categories: (1) papers, (2) notebooks and miscellaneous manuscripts and (3) letters. These three overall categories of material have slightly different characteristics, and these will be indicated in the notes that follow. The Boyle Papers comprise forty-six volumes of papers of folio or quarto format; the Boyle Letters comprise seven guardbooks of letters; and the miscellaneous manuscripts comprise thirty-one notebooks and other smaller bound volumes which at an early date were absorbed into the sequence of general manuscripts at the Royal Society.

As has already been noted in the text of this book, much manuscript material from the archive has been published, sometimes in Boyle's own time and sometimes since. Other items bear a significant relationship to published texts (or to other manuscript texts elsewhere in the archive). All these linkages are dealt with under the heading 'Related material' in the catalogue entries. The bulk of them refer to the editions of Boyle's *Works* and *Correspondence* that have already been referred to, where this material is often analysed in full: see further below. The following general comments may be made.

## Miscellaneous Manuscripts

Of the miscellaneous manuscripts, the main group of 'Boyle' items consists of nos. 185–200, with fifteen others scattered between nos. 10 and 181: these have been identified as being linked to Boyle from their appearance in an inventory of 'Bound books' in the Boyle archive made by Henry Miles (see chapter 1). In the catalogue, each volume is treated as a unit, with the components within them appearing as subsections. Some of these volumes retain their original bindings; others were rebound in the twentieth century. Various volumes (MSS 185–91, 194, 198–9) were used from both ends: the catalogue entries follow the foliation, but allowance should be made when using them for the fact that the items in the latter part of the volume were written from the back rather than the front. Many volumes contain a large number of blank pages. Lengthy series of these are noted both in the general heading to the volume in question



and at the point at which they occur; single blank leaves or smaller groups of them, on the other hand, are noted only in relation to the entries to which they are adjacent. In some cases, leaves have been torn out; these are also noted in relation to adjacent entries.

## **Boyle Letters and Papers**

In contrast to the miscellaneous manuscripts, which have been self-contained units ever since Boyle's time, the volumes in the Boyle Letters and Papers are artificial compilations created by their more recent custodians. Volumes 1–5 of the Boyle Letters are arranged in an approximately alphabetical sequence, while volume 6 is more miscellaneous and volume 7 comprises a separate chronological series of letters assembled by Henry Miles in the eighteenth century. All are now bound up in green buckram guardbooks of twentieth-century date. The Boyle Papers are very roughly sorted by subject: 'Theology' (vols. 1–7, 11–15), 'Philosophy' (vols. 8–10, 16), 'Physiology' (vols. 17–19), 'Science' (vols. 20–34) and 'Miscellaneous' (vols. 35–46). This arrangement dates from the Victorian period, when the Papers were bound in their current form, and each volume has a nineteenth-century contents page with a title which is noted in its general description. However, the content is far more miscellaneous than the lists on these pages imply. The Boyle Papers were uniformly rebound in 1990.

## **Catalogue Entries**

Various aspects of the different categories of data in the catalogue require elucidation, as follows. It may be presumed that these comments apply to all classes of material unless otherwise stated. Other categories (e.g. Language) are self-explanatory.

### *Reference*

Here, the archival reference for each item is given. Note that, whereas most volumes are foliated, some are paginated (BP 20–5, 27–8, 30–4 and parts of MS 192). In Boyle Letters 7, each item is given a number regardless of how many leaves it comprises. MS 44 in the miscellaneous series is not foliated. This information is recorded in the general entry describing each volume.

### *Title*

Original titles are distinguished from editorial ones by the use of inverted commas for the former.

### *Date*

Where a document (e.g. a letter) is precisely dated, this date is given here. In addition, the date is where necessary elucidated, for instance when a letter bears a New Style date.<sup>1</sup> In other cases, dates are approximate, and are based on the evidence of handwriting, or are deduced from the content of the document. In the case of the miscellaneous manuscripts, many of which are notebooks written up over a finite period, the entire contents of a volume can often be dated on the basis of the date of certain parts of it. Dates are sometimes given in the form ‘c. 1660’, or ‘1660s’, the latter indicating the decade from which the document dates. A question mark is used to indicate uncertainty about the date given.

### *Description*

This provides ancillary information about the item. In the case of the Boyle Letters, it notes whether a letter is the original or a copy; it also indicates the number of leaves that each item comprises and gives their size, in the form ‘fol’ for folio, ‘4o’ for quarto and ‘8o’ for octavo. Pairs of leaves may be presumed to be conjugate unless specifically described as separate. Information on format has not been given for the Boyle Papers and miscellaneous manuscripts unless the items in question are unusual (e.g. pasted-in scraps of paper), since the format of each volume may be presumed to be uniform unless otherwise stated.

With the Boyle Papers, this column often gives information about an item to supplement the ‘Title’; it also notes surviving original pagination, for instance, together with anomalous features such as physical imperfections. Within this field is embedded what might have formed a separate one, namely a description of the handwriting in which the document is written. These handwritings are listed in alphabetical order below. Some have the names of the individual to whom they can be attributed; others are the work of anonymous amanuenses who have been denoted by such descriptions as ‘1650s hand’ or ‘hand A’. For further information on these, see chapter 1.

### *Related Material*

This section is used to record crucial information about analogues to the item, either other manuscripts to which it is related, or printed works in which it is published or to which it is related. Insofar as the latter are works by Boyle himself, they are referred to by short titles, elucidated in the list below. The terminology used is as follows:

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<sup>1</sup> In Boyle’s period there was a discrepancy of ten days between English dates and those given in much of continental Europe, so that ‘13 January New Style’ was ‘3 January Old Style’.

- A reference preceded by ‘Published in’ implies that a definitive text of the manuscript in question appears at the point in the printed work that is cited. Often, such material is there published for the first time, particularly in the case of material in the *Works*. In other cases, particularly in the *Correspondence*, the new version may be presumed to supersede all previous ones (e.g. letters first published by Birch in the eighteenth century, details of which will be found cited at the relevant point). In cases where an abstract rather than a full text appears in *Correspondence*, the formula ‘Summarised in’ is used.
- A reference preceded by ‘See’ or ‘Cf.’ implies that the printed passage referred to is related to the item but is not a published version of it. Sometimes an entire book by Boyle is denoted thus; in these cases, the volume only of *Works* is included, rather than the page reference. ‘See’ is also used in relation to other manuscripts, and implies a close relationship between the two.
- A reference to a passage in one of Boyle’s published works cited without either ‘Published in’ or ‘See’ implies that the item in question appears to be the source of the version published in Boyle’s time.
- In addition to *Works* and *Correspondence*, various other references appear. Many of these are twentieth-century publications which are cited in full. However, three frequently recurring references may be noted here:

Workdiaries. For a complete digitised edition of Boyle’s workdiaries see <<http://www.livesandletters.ac.uk/wd>>. Each workdiary is made up of numbered entries, and references to these take the form 36-2 (i.e. Workdiary 36, entry 2).

HP. The Hartlib Papers at the University of Sheffield. These are available in electronic form, *The Hartlib Papers*, published on CD-ROM by HROnline, Humanities Research Institute, University of Sheffield (2nd edition, Sheffield, 2002).

Note: the 2002 version of this publication includes transcripts of various items in the Boyle archive, especially in BL 6 and 7, which have been noted as appropriate.

MacIntosh. These references are to J.J. MacIntosh’s book *Boyle on Atheism* (Toronto, 2005), which publishes much material from the archive for the first time. References take the form 2.1.54, denoting chapter 2, section 1, passage 54.

# Key to Principal Handwritings and Dates

1650s	Late 1650s or early 1660s
A	c. 1680
B	c. 1680
Bacon	1670s–1680s
Birch	c. 1740
C	c. 1680
D	1660s
E	1660s
Early Boyle	Late 1640s or early 1650s
Emes	c. 1680
F	1660s
G	1660s
Greg	1680s
H	1660s
J	1660s
K	1660s
L	1670s–1680s
M	1680s
Miles	Mid 18th century
N	1660s–1670s
Oldenburg	1660s–1670s
P	1650s
Q	1660s
R	1660s
Ramsay	1680s
Slare	1670s
Smith	1670s–1680s
Warr	1670s–1680s
Warr sen.	Late 17th century
Wotton	c. 1700



# List of Abbreviations

Birch, <i>Royal Society</i>	Thomas Birch, <i>The History of the Royal Society of London</i> (4 vols., London, 1756–7)
BL	Boyle Letters
BP	Boyle Papers
Cl.P.	Royal Society Classified Papers
<i>Correspondence</i>	Michael Hunter, Antonio Clericuzio and Lawrence M. Principe (eds.), <i>The Correspondence of Robert Boyle</i> (6 vols., London, 2001)
fol., fols.	folio, folios
Hartlib CD-ROM	<i>The Hartlib Papers</i> , 2nd edition, published by HR Online (Sheffield, 2002)
HP	Hartlib Papers, University of Sheffield (for electronic edition, see p. 282)
Hunter, <i>Heads &amp; Inquiries</i>	Michael Hunter (ed.), <i>Robert Boyle's 'Heads' and 'Inquiries'</i> , Occasional Papers of the Robert Boyle Project, No. 1 (London, 2005)
Hunter & Knight, <i>Human Blood</i>	Michael Hunter and Harriet Knight (eds.), <i>Unpublished Material relating to Robert Boyle's 'Memoirs for the Natural History of Human Blood'</i> , Occasional Papers of the Robert Boyle Project, No. 2 (London, 2005)
MacIntosh	J.J. MacIntosh, <i>Boyle on Atheism</i> (Toronto, 2005)
MS, MSS	manuscript, manuscripts
<i>NRRS</i>	<i>Notes and Records of the Royal Society of London</i>
NS	New Style
<i>Oldenburg</i>	A.R. and M.B. Hall (eds.), <i>The Correspondence of Henry Oldenburg</i> (13 vols., Madison and London, 1965–86)
OS	Old Style
<i>Phil. Trans.</i>	<i>Philosophical Transactions</i>
Tbd, Tb'd	transcribed (manuscript annotation)
<i>Works</i>	Michael Hunter and Edward B. Davis (eds.), <i>The Works of Robert Boyle</i> (14 vols., London, 1999–2000)

# List of Short Titles Used for Boyle's Works

(with the full titles in their original form and a note of the volume of *Works* in which each appears)

<i>Absolute Rest in Bodies</i>	<i>Of Absolute Rest in Bodies</i> , appended to the 2nd edition of <i>Certain Physiological Essays</i> (1669)	vol. 6
<i>Advertisement</i>	<i>An Advertisement of Mr Boyle, about the Loss of Many of his Writings</i> (1688)	vol. 11
<i>Aerial Noctiluca</i>	<i>The Aerial Noctiluca: Or Some New Phenomena, and a Process of A Factitious Self-shining Substance</i> (1680)	vol. 9
<i>Catalogue</i>	<i>A Catalogue of the Books and Tracts Written by the Honourable Robert Boyle Esquire</i> (1688; Eng. trans., 1689)	vol. 11
<i>Certain Physiological Essays</i>	<i>Certain Physiological Essays, Written at Distant Times, and on Several Occasions</i> (1661; 2nd edn, 1669)	vol. 1
<i>Christian Virtuoso, I</i> (or <i>Christ. Virt., I</i> )	<i>The Christian Virtuoso: Shewing, That by Being Addicted to Experimental Philosophy, a Man is Rather Assisted, than Indisposed, to be a Good Christian</i> (1690–1)	vol. 11
<i>Christian Virtuoso, I, Appendix</i> (or <i>Christ. Virt., I, Appendix</i> )	<i>Appendix to The Christian Virtuoso</i> , ed. Henry Miles, first published in Birch's edition of Boyle's <i>Works</i> (1744)	vol. 12
<i>Christian Virtuoso, II</i> (or <i>Christ. Virt., II</i> )	<i>The Christian Virtuoso, Part II</i> , ed. Henry Miles, first published in Birch's edition of Boyle's <i>Works</i> (1744)	vol. 12
<i>Cold</i>	<i>New Experiments and Observations Touching Cold, or an Experimental History of Cold, Begun</i> (1665)	vol. 4
<i>Colours</i>	<i>Experiments and Considerations Touching Colours</i> (1664)	vol. 4
<i>Cosmical Qualities</i>	<i>Tracts Written by the Honourable Robert Boyle About the Cosmicall Qualities of Things</i> [etc.] (1670)	vol. 6

'Cosmical Suspensions'	'Cosmicall Suspitions (Subjoyned as an Appendix to the Discourse of the Cosmicall Qualities of Things)', in <i>Tracts Written by the Honourable Robert Boyle About the Cosmicall Qualities of Things</i> (1670)	vol. 6
<i>Customary Swearing</i>	<i>A Free Discourse against Customary Swearing</i> (1695)	vol. 12
<i>Defence</i>	<i>A Defence of the Doctrine Touching the Spring and Weight of the Air</i> (1662)	vol. 3
<i>Degradation of Gold</i>	<i>An Historical Account of a Degradation of Gold Made by an Anti-Elixir: a Strange Chymical Narrative</i> (1678)	vol. 9
<i>Effluvioms</i>	<i>Essays of the Strange Subtilty, Great Efficacy [and] Determinate Nature of Effluvioms</i> (1673)	vol. 7
'Essay on Nitre'	'A Physico-Chymical Essay, containing an Experiment with some Considerations touching the differing Parts and Redintegration of Salt-petre', in <i>Certain Physiological Essays</i> (1661; 2nd edn, 1669)	vol. 2
<i>Examen</i>	<i>An Examen of Mr. T. Hobbes his Dialogus Physicus De Natura Aeris</i> (1662)	vol. 3
'Excellency of the Mechanical Hypothesis'	'About the Excellency and Grounds of the Mechanical Hypothesis', in <i>Excellency of Theology</i> (1674)	vol. 8
<i>Experimenta &amp; Observationes Physicae</i> (or <i>Exp. &amp; Obs. Physicae</i> )	<i>Experimenta &amp; Observationes Physicae Wherein are Briefly Treated of Several Subjects Relating to Natural Philosophy in an Experimental Way</i> (1691)	vol. 11
<i>Final Causes</i>	<i>A Disquisition about the Final Causes of Natural Things</i> (1688)	vol. 11
<i>Flame and Air</i>	<i>Tracts Written by the Honourable Robert Boyle Containing New Experiments, touching the Relation betwixt Flame and Air [etc.]</i> (1672)	vol. 7
<i>Forms and Qualities</i>	<i>The Origine of Formes and Qualities, (According to the Corpuscular Philosophy)</i> (1666–7)	vol. 5
<i>Free Enquiry</i>	<i>A Free Enquiry into the Vulgarly Receiv'd Notion of Nature: Made in an Essay Address'd to a Friend</i> (1686)	vol 10
<i>Gems</i>	<i>An Essay about the Origine &amp; Virtues of Gems</i> (1672)	vol. 7

<i>General History of Air</i>	<i>The General History of the Air, Designed and Begun by the Honourable Robert Boyle Esq.</i> (1692)	vol. 12
‘Greatness’	‘Greatness of Mind, Promoted by Christianity’, appended to <i>The Christian Virtuoso</i> , I (1690–1)	vol. 11
<i>Hidden Qualities</i>	<i>Tracts: Containing Suspicions about Some Hidden Qualities of the Air</i> [etc.] (1674)	vol. 8
<i>High Veneration</i>	<i>Of the High Veneration Man’s Intellect Owes to God; Peculiarly for his Wisdom and Power</i> (1684–5)	vol. 10
<i>Human Blood</i>	<i>Memoirs for the Natural History Of Humane Blood, Especially The Spirit of that Liquor</i> (1684)	vol. 10
‘Hydrostatical Discourse’	‘An Hydrostatical Discourse occasion’d by some Objections of Dr Henry More against some Explications of New Experiments’, in <i>Tracts Written by the Honourable Robert Boyle Containing New Experiments, touching the Relation betwixt Flame and Air</i> (1672)	vol. 7
<i>Hydrostatical Paradoxes</i>	<i>Hydrostatical Paradoxes, Made out by New Experiments, (For the Most Part Physical and Easie)</i> (1666)	vol. 5
<i>Icy Noctiluca</i>	<i>New Experiments, and Observations, Made upon the Icy Noctiluca</i> (1682)	vol. 9
‘Invitation to Free Communication’	‘An Invitation to a free and generous Communication of Secrets and Receits in Physick’, in <i>Chymical, Medicinal, and Chyrurgical Addresses: Made to Samuel Hartlib, Esquire</i> (1655)	vol. 1
<i>Languid Motion</i>	<i>An Essay Of the Great Effects of Even Languid and Unheeded Motion</i> (1685)	vol. 10
<i>Mechanical Qualities</i>	<i>Experiments, Notes, &amp;c. about the Mechanical Origine or Production of Divers Particular Qualities</i> (1675–6)	vol. 8
<i>Medicina Chromatica</i>	<i>Medicina Chromatica</i>	vol. 14
<i>Medicina Hydrostatica</i>	<i>Medicina Hydrostatica: or, Hydrostaticks Applied to the Materia Medica</i> (1690)	vol. 11
<i>Medicinal Experiments</i>	<i>Medicinal Experiments: Or, a Collection Of Choice and Safe Remedies, For the Most Part Simple, and Easily Prepared</i> (3 vols., 1692–4)	vol. 12



<i>Mineral Waters</i>	<i>Short Memoirs for the Natural Experimental History of Mineral Waters</i> (1685)	vol. 10
<i>Notion of Nature</i>	<i>A Free Enquiry Into the Vulgarly Receiv'd Notion of Nature; Made in an Essay, Address'd to a Friend</i> (1686)	vol. 10
<i>Occasional Reflections</i>	<i>Occasional Reflections Upon Several Subjects</i> (1665)	vol. 5
<i>Porosity</i>	<i>Experiments and Considerations About the Porosity of Bodies, in Two Essays</i> (1684)	vol. 10
'Possibility of the Resurrection'	'Some Physico-Theological Considerations about the Possibility of the Resurrection', in <i>Some Considerations about the Reconcilableness of Reason and Religion</i> (1675)	vol. 8
<i>Producibleness</i>	<i>Experiments and Notes About the Producibleness Of Chymicall Principles</i> , appended to the 2nd edition of <i>Sceptical Chymist</i> (1680)	vol. 9
<i>Rarefaction of the Air</i>	<i>Tracts Written by the Honourable Robert Boyle Of A Discovery of the Admirable Rarefaction of the Air</i> (1670)	vol. 6
<i>Reason and Religion</i>	<i>Some Considerations about the Reconcilableness of Reason and Religion</i> (1675)	vol. 8
<i>Receipts of Medicines</i>	<i>Some Receipts of Medicines, For the most part Parable and Simple. Sent to a Friend in America</i> (1688)	vol. 11
'Reflections'	'Reflections upon a Theological Distinction', appended to <i>The Christian Virtuoso</i> , I (1690–1)	vol. 11
<i>Saltiness of the Sea</i>	<i>Tracts Consisting of Observations About the Saltiness of the Sea [etc.]</i> (1673)	vol. 7
<i>Salt-water Sweetned</i>	Robert Fitzgerald, <i>Salt-Water Sweetned; or, A True Account of the Great Advantages of this New Invention both by Sea and by Land</i> (1683)	vol. 9
'Salubrity of the Air'	'An Experimental Discourse of Some Unheeded Causes of the Insalubrity and Salubrity of the Air', appended to <i>Languid Motion</i> (1685), above	vol. 10
<i>Sceptical Chymist</i>	<i>The Sceptical Chymist: or Chymico-Physical Doubts &amp; Paradoxes</i> (1661)	vol. 2
<i>Seraphic Love</i>	<i>Some Motives and Incentives to the Love of God. Pathetically Discours'd of, in a Letter to a Friend</i> (1659)	vol. 1

<i>Specific Medicines</i>	<i>Of the Reconcilableness of Specifick Medicines to the Corpuscular Philosophy</i> (1685)	vol. 10
<i>Spring of the Air</i>	<i>New Experiments Physico-Mechanical, Touching the Spring of the Air and its Effects</i> (1660)	vol. 1
<i>Spring, 1st Continuation</i>	<i>A Continuation of New Experiments Physico-Mechanical, Touching the Spring and Weight of the Air, and their Effects. The First Part</i> (1669)	vol. 6
<i>Spring, 2nd Continuation</i>	<i>A Continuation of New Experiments Physico-Mechanical Touching the Spring and Weight of the Air, and their Effects. The Second Part</i> (1680; Eng. trans., 1682)	vol. 9
‘Strange Reports’	‘Strange Reports. In II Parts’, appended to <i>Experiments et Observationes Physicae</i> (1691)	vol. 11
<i>Style of the Scriptures</i>	<i>Some Considerations Touching the Style of the Holy Scriptures</i> (1661)	vol. 2
<i>Theodora</i>	<i>The Martyrdom of Theodora, And of Didymus</i> (1687)	vol. 11
<i>Things above Reason</i>	<i>A Discourse of Things above Reason. Inquiring Whether a Philosopher Should Admit There Are Any Such</i> (1681)	vol. 9
<i>Usefulness, I</i>	<i>Some Considerations touching the Usefulness of Experimentall Naturall Philosophy. The First Part</i> (1663)	vol. 3
<i>Usefulness, II, sect. 1</i>	<i>Some Considerations of the Usefulness of Naturall Philosophy. The Second Part. The First Section. Of It's Usefulness to Physick</i> (1663)	vol. 3
<i>Usefulness, II, sect. 2</i>	<i>Some Considerations Touching the Usefulness of Experimental Naturall Philosophy. The Second Tome, Containing the later Section Of the Second Part</i> (1671)	vol. 6
	*Note: Boyle's usage has sometimes been followed in referring to the two 1663 components of <i>Usefulness</i> as ‘Tome 1’ and the 1671 sequel as ‘Tome 2’.	
‘Vitiated Sight’	‘Some Uncommon Observations about Vitiated Sight’, appended to <i>Final Causes</i> (1688), above	vol. 11



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The Boyle Papers

Volume 1

Folio-size volume; foliated; 176 folios. 19th-century contents leaf: Theology.

Ref.	Title	Date	Description	Language	Related material
BP 1 fols. 1–9	Material on pasted slips relating to <i>Christian Virtuoso</i> and to tract on atheism	1670s–	Includes MS versions of the following passages in <i>Christ. Virt. I, Appendix</i> and <i>Christ. Virt. II</i> 1. Fol. 1d: General Aphorisms, Aphorism VII 2. Fol. 8c: paragraph 13 in Occasional Thoughts at end of fourth conference 3. Fol. 9b: paragraph 12 in Occasional Thoughts at end of fourth conference Hands: Bacon, Smith	English	1. <i>Works</i> , vol. 12, pp. 527–8 2. <i>Works</i> , vol. 12, p. 424 3. <i>Works</i> , vol. 12, pp. 423–4 Other items published in MacIntosh, 2.1.54, 61, 80, 83, 94; 2.2.60–1; 2.3.23; 3.3.5
		1680s			
BP 1, fols. 10–14	Material relating to <i>Christian Virtuoso</i> and to tract on atheism	1670s– 1680s	Fol. 12 is MS version of paragraph 9 in Occasional Thoughts at end of fourth conference. For earlier version, see BP 1, fol. 83b. Hands: Bacon, Smith	English	For fol. 12 see <i>Works</i> , vol. 12, p. 423 Other items published in MacIntosh, 2.1.11; 2.3.15–16; 4.4.1
BP 1, fol. 15	Cover sheet, endorsed by Miles	Mid 18th century		English	
BP 1, fols. 16–51X	Material relating to <i>Christian Virtuoso</i> , tract on atheism and other works, some pasted down	1670s– 1680s	Includes MS versions of the following passages in <i>Christ. Virt. I, Appendix</i> and <i>Christ. Virt. II</i> : 1. Fol. 28b–c. Discarded version of a paragraph near the end of the preface (fol. 28c), adjacent to another snippet (fol. 28b) endorsed ‘The two Notes were pin’d to the 2d page of the Preface’.	English	1. <i>Works</i> , vol. 11, p. 288 2. <i>Works</i> , vol. 12, p. 398 3. <i>Works</i> , vol. 12, p. 398 An overlapping passage appears in <i>Things above Reason, Works</i> , vol. 9, pp. 398–9. Other items published in MacIntosh 2.1.10, 12, 14, 26,



Ref.	Title	Date	Description	Language	Related material
BP 1, fols. 52–4 (3 leaves)	MS version of part of <i>Christ. Virt., II</i> , and material relating to the work.	1680s	2. Fol. 34b. A snippet, similar to opening sentence in conference III, argument V. Copied from BP 7, fol. 162v(b).	English	29–32, 42, 46, 50, 63–4, 90; 2.2.13, 42–3, 45–6, 52, 57, 62, 64–5; 2.3.10, 13, 17, 19, 24; 3.1.2, 5; 3.2.4, 6, 11; 3.3.3–4; 3.4.2, 10–11, 14–16, 18, 21–2, 24, 29, 34–6, 40–2; 3.5.2, 4, 13–14; 3.6.6; 3.8.7, 11; 4.2.3; 4.5.2
			3. Fol. 39a copied from BP 7, fol. 169c. Fol. 51X, a part leaf, is a cover sheet with note by Miles: ‘Transcrib’d belong: to Xtn Virtuoso’. Hand: Bacon		
BP 1, fols. 55–75	Material relating to <i>Christian Virtuso</i> and to tract on atheism and other works	1670s–1680s	MS version of proposition I, introduction, slight changes before printing (fols. 52–3). For an earlier version, see BP 10, fol. 11. Followed by List of contents of entire work (fol. 53x) and Boyle’s notes on the contents and whereabouts of the second part of the <i>Christian Virtuso</i> . Copy of BP 5, fol. 94r; for original, see MS 187, fols. 94–6. Hands: Bacon	English, Latin	Partly published in MacIntosh, 2.1.2, 16, 20, 23, 44, 58, 65, 95; 2.2.29, 54–6; 2.3.6, 21–2, 25; 3.2.9–10, 13, 15; 3.5.10, 20; 3.6.11, 19–20; 3.7.8; 3.8.8–10; 4.2.2, 9, 14; 4.6.1, 3
			Pasted-down snippets and longer sections of text, some marked for parts of <i>Christ. Virt., I</i> , Latin <i>Appendix</i> , including an outline in verse of the four conferences (fol. 55d); much of it copied by Miles in BP 5. Fol. 60 is a Latin extract in an unknown hand Hands: Bacon, Greg (fol. 55d), Smith (fol. 66), C (fol. 73b)		

Ref.	Title	Date	Description	Language	Related material
BP 1, fol. 76	Cover sheet entitled 'IV. The Tome C containeing part of the confused Collection of Mr Boyles Papers belonging to the 3d & 4th Conferences annex'd to the Second part of the Christian Virtuoso'	c. 1680 / mid 18th century	Endorsed by Miles: 'Contains Papers Transcrib'd from No LXIV to No LXXXV Inclusive' Hands: C, Miles	English	
BP 1, fols. 77–9	MS version of part of <i>Christ. Virt., Appendix</i>	1680s	Fourth conference, endorsed '6th Arg' in red pencil, but not labelled as such in Birch. N.N. speaks. Names of interlocutors added in pencil. Two paragraphs on fol. 79 are unpublished but clearly related to <i>Christian Virtuoso</i> ; Miles indicates that he found another copy of this folio, marked for '4 Conf 6 Arg'. Copied by Miles in BP 5, fol. 4, paragraph 'LXXI'. Copied out on BP 1, fols. 116–17. Hands: Bacon, C	English	<i>Works</i> , vol. 12, pp. 414–15. Fol. 79 published in MacIntosh, 4.2.7
BP 1, fols. 80–2	MS version of part of <i>Christ. Virt., I, Appendix</i>	1680s	Final 6 paragraphs of body of fourth conference. Endorsed in red pencil 'bel[ongs] to Arg. 6' Hand: Bacon, adds. by Greg on fol. 82	English	<i>Works</i> , vol. 12, pp. 419–20
BP 1, fols. 83–4	Material relating to <i>Christ. Virt.</i> , ? 1680s <i>I, Appendix</i>		Four sections of text, one published: (a) Copy of BP 10, fol. 150 (b) MS version of paragraph 9 in Occasional Thoughts at end of fourth conference. For later version, see BP 1, fol. 12. (c) Copy of BP 1, fol. 68d. (d) Unpublished paragraph on right reason, endorsed for '4 Conf' and '6th a' Hand: Bacon	English	(b) <i>Works</i> , vol. 12, p. 423

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 1, fol. 85	MS version of part of <i>Christ. Virt., I, Appendix</i>	1686 or later	Summary of conference IV, showing addition of fourth principle. For a copy, see BP 1, fol. 134. Hand: Greg	English	<i>Works</i> , vol. 12, p. 421
BP 1, fols. 86–91	Material relating to <i>Christ. Virt., I, Appendix</i>	? 1680s	Unpublished passages on right reason, endorsed for ‘4 Conf’	English	See <i>Works</i> , vol. 12. Fol. 88 published in MacIntosh, 2.3.30
BP 1, fols. 92–6	MS version of part of <i>Christ. Virt., I, Appendix</i>	1690–1691	Conference IV, argument V, complete. Copied out on fols. 97–101 and fols. 111–15, except for bracketed sentence on fol. 95r/v that was omitted from published text; this sentence copied out in BP 1, fol. 110. Names of interlocutors added in pencil. Fol. 96 is copy of MS 187, fol. 156v. Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 411–14
BP 1, fols. 97–102	MS version of part of <i>Christ. Virt., I, Appendix</i>	1690–1691	Copy of fols. 92–6, bound out of order (fol. 97, a copy of MS 187, fol. 156v, should follow fol. 101). The bracketed sentence on fol. 95r/v is crossed through in red and marked ‘dele’. Names of interlocutors added in pencil. Fol. 102 is a cover sheet endorsed by Miles. Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 411–14
BP 1, fols. 103–6	MS version of part of <i>Christ. Virt., I, Appendix</i>	? 1680s	Conference IV, arguments I and II, complete, no changes before publication. Names of interlocutors added in pencil. Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 403–7
BP 1, fols. 107–9	MS version of part of <i>Christ. Virt., I, Appendix</i>	? 1680s	Conference IV, argument IV, no changes prior to publication. Names of interlocutors added in pencil. Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 409–11

Ref.	Title	Date	Description	Language	Related material
BP 1, fol. 110	Material relating to <i>Christ. Virt., I, Appendix</i>	1690–1691	Long sentence about Aristotle and the eternity of the world, originally intended for inclusion in conference IV, argument V; bracketed in versions on fol. 95r/v and fol. 101 but omitted from that on fol. 114v Hand: Bacon	English	Published in <i>Works</i> , vol. 12, p. 413n, and in MacIntosh, 3.2.17
BP 1, fols. 111–15	MS version of part of <i>Christ. Virt., I, Appendix</i>	1690–1691	Another copy of conference IV, argument V (see BP 1, fols. 92–6); appears to be the final MS version, for it omits the bracketed section. Names of interlocutors added in pencil. Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 411–14
BP 1, fols. 116–23	MS version of part of <i>Christ. Virt., I, Appendix</i>	? 1680s	MS version of conference IV, endorsed in red ipencil ‘6th Arg’; first part a copy of fols. 77–8. Names of interlocutors added in pencil. Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 414–19
BP 1, fols. 124–30	Material relating to <i>Christ. Virt., I, Appendix</i>	? 1680s	Unpublished passages, some pasted down, about reason and revelation, most endorsed for inclusion in various conferences. Some copied out by Miles in BP 5. Fol. 124b, taken from a cover page for the ‘4th Conference’, is endorsed by Boyle ‘Dubious Papers’ and by Miles ‘Sev[era]ll to the Xtn Virtuoso 3rd & 4th Conferences of the Appendix’. Fol. 130a is an outline of the summary of conference III, in verse. Copied by Miles in BP 5, fol. 13. Hands: Bacon; Boyle, ? (fol. 124a); Smith (fol. 125a)	English, Greek, Latin	See <i>Works</i> , vol. 12 Material from fols. 125, 127 and 128 published in MacIntosh, 2.1.34, 3.3.1, 3.5.15, 3.8.5
BP 1, fols. 131–2	MS version of part of <i>Christ. Virt., I, Appendix</i>	? 1680s	MS version of conference IV, argument III, no changes prior to publication, complete. Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 407–9



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 1, fol. 133	Material relating to <i>Christ. Virt., I, Appendix</i>	1691	Endorsed ‘A Short Preamble to the 4 Conferences’. Boyle discusses his plan to supplement the first part of <i>Christian Virtuoso</i> with ‘a distinct tract’ comprising four arguments. Hand: Bacon	English	Published in <i>Works</i> , vol. 12, p. 369 Copy of MS 186, fols. 181–2
BP 1, fol. 134	MS version of part of <i>Christ. Virt., I, Appendix</i>	1686 or later	MS version of the summary of conference IV. Copy of BP 1, fol. 85. Hand: Bacon	English	<i>Works</i> , vol. 12, p. 421
BP 1, fol. 135–7	MS version of part of <i>Christ. Virt., I, Appendix</i>	1680s	Introduction to conference II. Hands: Bacon, corr. by Boyle; Greg	English	<i>Works</i> , vol. 12, pp. 380–1
BP 1, fols. 138–58	Material relating to <i>Christ. Virt., I, Appendix</i>	1680s; 1670s (fol. 142)	Several unpublished passages, some pasted down, about reason and revelation, all endorsed for various parts of the fourth conference, for which they were clearly intended. Some copied out by Miles in BP 5. Hand: Bacon, Slare (fol. 142); some corr. by Boyle	English	See <i>Works</i> , vol. 12 Material from fols. 138, 142–5 published in MacIntosh, 4.2.8, 12–13; 4.4.4
BP 1, fols. 159–62	Papers on idea of an infinitely perfect being and related topics	1670s–1680s	Hands: Greg, Bacon	English	
BP 1, fol. 163	Vellum cover sheet, endorsed by Miles	Mid 18th century	Hand: Miles	English	
BP 1, fols. 164–6	Material relating to <i>Christ. Virt., I, Appendix</i>	? 1680s	Three unpublished passages about reason and revelation, all endorsed for various parts of the third and fourth conferences. Some copied out by Miles in BP 5. Hand: Bacon, corr. by Boyle	English	See <i>Works</i> , vol. 12 Fol. 164 published in MacIntosh, 4.4.3

Ref.	Title	Date	Description	Language	Related material
BP 1, fols. 167–8	MS version of part of <i>Christ. Virt., I</i>	1670s or later	The bulk of this appears with some changes and additions in paragraph XX in ‘Reflections’; the rest is unpublished. Copied by Miles as BP 5, fol. 3, paragraph ‘LXIII’. Hand: Bacon, corr. by Boyle	English	<i>Works</i> , vol. 11, pp. 339–40
BP 1, fols. 169–76	Several unpublished passages about reason and revelation, all endorsed for various parts of the third and fourth conferences	? 1680s	Pasted down slips. Some copied out by Miles in BP 5. Fol. 169d is an MS version of paragraph 10 in ‘Occasional Thoughts’ at end of fourth conference ( <i>Christ. Virt., I, Appendix</i> ). Also appears in BP 7, fol. 113. Hand: Bacon, corr. by Boyle	English	For fol. 169d see <i>Works</i> , vol. 12, p. 423 Material from fols. 170–6 published in MacIntosh, 2.1 22, 24–5, 41, 84, 86, 92; 2.2.50, 59, 63; 4.2.4

Volume 2

Folio-size volume; foliated; 202 folios. 19th-century contents leaf: Theology.

Ref.	Title	Date	Description	Language	Related material
BP 2, fols. 1–37	Response to atheist arguments, especially Epicurean atomism	Late 17th century	Certain leaves have original pagination in the form ‘A-C’, ‘E-F’, ‘L-P’ and ‘Q-W’. Hands: Warr, Bacon, B; addns by C, Slare, Boyle, A	English	Published in MacIntosh, 4.1
BP 2, fols. 38–44	MS version of part of <i>Reason and Religion</i>	1660s	Part of section VII; for first part, see BP 2, fols. 93–7. Some passages added later. Hand: E	English	<i>Works</i> , vol. 8, pp. 278–81
BP 2, fols. 45–7	MS version of part of <i>Reason and Religion</i>	1660s	Part of section II; for more, see BP 2, fols. 128–33. Passage on fols. 46–7 not published. Hand: E	English	<i>Works</i> , vol. 8, pp. 249–51, including previously unpublished material

Ref.	Title	Date	Description	Language	Related material
BP 2, fols. 48–57	MS version of parts of <i>Reason and Religion</i> and <i>Christ. Virt., I, Appendix</i>	1660s	(1) Most of all three (numbered) parts of section VI of <i>Reason and Religion</i> : (i) latter portion of part 1 (fol. 56 top, followed by fols. 52–4); follows BP 2, fols. 72–5; this endorsed in pencil ‘Sect the—’ (ii) part 2 (fols. 56–7) (iii) part 3 (fols. 48–51) (2) Fol. 55, in same hand, is MS version of a final paragraph in conference III, argument IV, in <i>Christian Virtuoso, I, Appendix</i> , some changes before publication Hand: E, some corrections by Boyle	English	(1) <i>Works</i> , vol. 8, pp. 267–73 (2) <i>Works</i> , vol. 12, pp. 397–8 For a copy, see BP 5, fol. 101
BP 2, fols. 58–65	Various arguments against atheists and in favour of God’s existence	1670s– 1680s	Hands: Bacon, Warr	English	Published in MacIntosh, 3.1.3, 3.2.1, 3.5.1, 3.5.3, 4.4.5; 5.1
BP 2, fols. 66–71	MS version of conclusion of <i>Reason and Religion</i>	1660s	Endorsed in pencil ‘The Conclusion of the 1 Part of my Epistle’ Hand: E	English	<i>Works</i> , vol. 8, pp. 291–4
BP 2, fols. 72–5	MS version of part of <i>Reason and Religion</i>	1660s	First portion of section VI, part 1; continued in BP 2, fols. 56 top and 52–4. Hand: E, corr. by Boyle; K	English	<i>Works</i> , vol. 8, pp. 265–7
BP 2, fols. 76–7	Cover sheet and list of contents for ‘the little Tract about Atheism’	1670s– 1680s	Hand: Warr	English	Published in MacIntosh, 1.1
BP 2, fols. 78–92	Erroneous doctrine and atheists’ mistakes as impediments to belief	1670s– 1680s	Hands: Slare, Warr; addns by Boyle	English	Published in Macintosh, 2.1.96, 4.3.4

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 2, fols. 93–7	MS version of part of <i>Reason and Religion</i>	1660s	Part of section VII; continued in BP 2, fols. 38–44. Some passages added later. Hand: E	English	<i>Works</i> , vol. 8, pp. 273–7
BP 2, fols. 98–9	Section of text and cover sheet	1670s– 1680s	Fol. 99 blank except for endorsement Hands: Warr, ?C, E	English	
BP 2, fols. 100–10	Reply to argument that incorporeal things cannot effect corporeal ones, also commenting on mistakes and personal failings of atheists	1670s– 1680s	Hands: Bacon, Warr, Slare	English	Fols. 100–5 and 108–10 published in MacIntosh, 2.3.4, 3.5.21, 4.6.4–5
BP 2, fols. 111–27	MS version of part of <i>Reason and Religion</i>	1660s	Most of section VIII Hand: E	English	<i>Works</i> , vol. 8, pp. 281–8
BP 2, fols. 128–38	MS version of parts of <i>Reason and Religion</i>	1660s	Original versions of sections I and III and part of section II. For an addition to section II, see BP 2, fols. 45–7. Hand: E, corr. by Boyle	English	<i>Works</i> , vol. 8, pp. 247–9, 251–5
BP 2, fols. 139–40	Advisability of attending to future state	1670s	Hand: Slare	English	Published in MacIntosh, 3.3.2
BP 2, fols. 141–2	Fragment of Boyle’s ‘Essay on Spontaneous Generation’	1670s– 1680s	Hand: Bacon	English	Published in <i>Works</i> , vol. 13, pp. 286–8
BP 2, fols. 143–51	‘Notes belonging to the Causes of Atheisme’	1670s– 1680s	Hands: Bacon, Slare, C, Warr	English	Mostly published in MacIntosh, 2.3.2, 3.1.9, 3.2.5, 3.2.12, 3.4.33, 4.3.1, 4.5.4–5, 4.6.6–7



Ref.	Title	Date	Description	Language	Related material
BP 2, fols. 152–85	Protestant polemic against Catholic practices	? Early 17th-century	Some original pagination. Some sheets slightly damaged and the opening ones appear to be missing. Hand: unknown	English	
BP 2, fol. 186	[Workdiary 5, part 1]	Late 1640s	Passage of text condemning verbose writing lacking substance Hand: early Boyle	English	Workdiary 5, part 1. See also BP 3, fols. 90, 95; BP 36, fol. 86
BP 2, fols. 187–9	Material relating to <i>Notion of Nature</i>	c. 1680	On ‘art’ as a similar reification to ‘nature’: probably intended for publication in this work. Endorsed ‘Transcrib’d by Robin’, in Boyle’s hand. Hand: B	English	Published in <i>Works</i> , vol. 14, pp. 158–60
BP 2, fol. 190	MS version of part of <i>Notion of Nature</i>	c. 1680	Section VI, paragraph 33. Continuation of document in BP 18, fols. 103–4. Hand: C	English	<i>Works</i> , vol. 10, pp. 512–13
BP 2, fols. 191–8	‘Introductio ad soluta theologica nostra Adversaria’, ‘Introduction to my Loose Notes Theological’	1680s	Hand: Ramsay	Latin	Published in <i>Works</i> , vol. 14, pp. 277–83 See also BP 5, fols. 16–34.
BP 2, fols. 199–202	MS version of part of <i>Christ. Virt., I</i>	Late 17th century	Most of the end of point VII in opening section, with comments on types of experience; linked to part of text of ‘Greatness of Mind’; missing final paragraph before proposition I; first paragraph of MS rewritten before publication, otherwise only minor changes. Some damage to text. Hand: unknown	English	<i>Works</i> , vol. 11, pp. 307–9

Volume 3

Folio-size volume; foliated; 164 folios. 19th-century contents leaf: Theology.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 3, fols. 1–11	Notes under the running title ‘Miscellanea’ on such topics as the word ‘Amen’, trust in God, fear of shame and punishment, the exercise and increase of faith, etc.	1670s–1680s	Original pagination, pp. 43–65 Hand: Warr	English	
BP 3, fols. 12–13	Lessons in life and faith from a passage in the Epistle to the Philippians	1670s–	Hand: Warr	English	
BP 3, fols. 14–38	Notes on Luther’s sermons and commentaries	1670s–1680s	Dealing with such topics as ‘Life’, ‘Faith’, ‘Calamities’, ‘Prayer’, ‘Meditation’, ‘True & false Wisdome’, ‘Unbelief’, ‘Covetousness’, ‘Hope’, ‘Temptation’ Hand: Warr	English	
BP 3, fols. 39–58	Religious notes, evidently based on extracts from works of Twisse and Rutherford	1670s–1680s	Headings include ‘De Praedestinatione’, ‘Decrees’, ‘Faith’, ‘Reprobation’, ‘Workes’, ‘Power of God’, ‘Fear’, ‘Liberty’, ‘Order’, ‘Punishment’; also note of some Arminian mistakes. Hand: Warr	English	W. Twisse, <i>Doctrine of the Synod of Dort</i> (1650?); S.Rutherford, <i>Influence of the Life of Grace</i> (1659)
BP 3, fols. 59–63	Miscellaneous leaves of theological notes, dealing with such topics as God’s attributes, types of predictions of Christ, articles of Christian faith, etc.	1670s–1680s	Hands: Warr, ?	English	

Ref.	Title	Date	Description	Language	Related material
BP 3, fols. 64–73	Theological notes and biblical references	Late 17th century	Sheets folded and written in double columns Hand: unknown	English	
BP 3, fols. 74–82	Letter on a theological dispute, addressed to ‘My much Respected friend Mr. W.C. minister of God’s word att S. in Somersetshire’	11 March 1674	Detailed replies to a number of points made in a letter by theological adversary, ‘T.C.’, refuting accusations that the author is pro-Pelagian and questioning his rival’s learning. Author unknown, but signs himself ‘J.M.’ from ‘St. A.’. ?Holograph	English	
BP 3, fol. 83	‘Periochae capitum Novis Testamenti: Liber S. Matthaei/ Marci Evangelistae’	Late 17th century	Latin verse list of contents from two of the Gospels Hand: unknown	Latin	
BP 3, fols. 84–6	Material on proof of Christianity and evidence of miracles	1660s–1680s	Hands: Smith, G	English	First paragraph on fol. 84 published in MacIntosh, 3.6.22
BP 3, fols. 87–9	MS version of part of <i>Christ. Virt., II</i>	1680s	Fol. 87: clean copy (no corrections, no changes before publication) of Proposition V, paragraph 4 Fol. 88: MS version of Proposition IV, three final paragraphs except very last one; no changes before publication. Fol. 89: MS version of Proposition V, paragraph 8. The lines at the top, which are continuous with the the rest, were not published. Hands: fol. 87: C; fol. 88: B; fol. 89: Bacon	English	<i>Works</i> , vol. 12, pp. 515–16, 518–19, 521–2
BP 3, fol. 90	[Workdiary 5, part 2].	Late 1640s	Four extracts on religious topics, from books by ‘Lord Brook’ and ‘Mr. D’Espaigne’ Hand: early Boyle	English	Workdiary 5, part 2 See also BP 2, fol. 186; BP 3, fol. 95; BP 36, fol. 86

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 3, fols. 91–2	‘Of the Study & Exposition of the Scriptures. Essay the VI’	Late 1640s	Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 117–19. See plate 1
BP 3, fols. 93–4	Copy of Huguenot convert’s profession of Catholicism	17th century	Hand: unknown	English	
BP 3, fol. 95	[Workdiary 5, part 3].	Late 1640s	Comments on work on piety by an unnamed female author Hand: early Boyle	English	Workdiary 5, part 3 See also BP 2, fol. 186; BP 3, fol. 90; BP 36, fol. 86
BP 3, fols. 96–7	Fragment of Boyle’s ‘Essay on Spontaneous Generation’	1650s or early 1660s	Marked for insertion: ‘Ad Pag. 42am: marke X’ Hand: rounded 1650s	English	Published in <i>Works</i> , vol. 13, pp. 284–6
BP 3, fols. 98–9	Notes on the meaning of various numbers in the Book of Revelation as predicting the overthrow of Rome	1680s	Hand: Greg	English	
BP 3, fols. 100–1	Cover sheet with endorsement by Miles; reused from letter, with seal	1743	Dated 21 January 1742/3 Hands: Miles, ?	English	
BP 3, fols. 102–3	Notes for a paper against Spinoza	1670s–1680s	Endorsed ‘These loose notes belong to the Discourse of Miracles’ Hand: Bacon	English	Published in R.L. Colie, ‘Spinoza in England 1665–1730’, <i>Proc. of the Amer. Philos. Soc.</i> , 107 (1963), 183–219, on pp. 216–17, and in MacIntosh, 3.6.31–5
BP 3, fols. 104–8	‘About the Miracle wrought on Whitsunday’	1670s–1680s	Fol. 108 duplicates fols. 104–5 Fol. 106 is a list of heads Hand: Bacon	English	Fol. 106 printed in R.L. Colie, ‘Spinoza in England 1665–1730’, <i>Proc. of the Amer. Philos. Soc.</i> , 107 (1963), 183–219, on p. 217.



Ref.	Title	Date	Description	Language	Related material
BP 3, fols. 109–10	Further papers on miracles	1660s	Hand: D	English	Published in R.L. Colie, ‘Spinoza in England 1665–1730’, <i>Proc. of the Amer. Philos. Soc.</i> , 107 (1963), 183–219, on pp. 217–8, and in MacIntosh, 3.6.25.
BP 3, fols. 111–14	Reply to argument of impossibility of miracles	Late 17th century	Fol. 114 blank except for endorsements	English	Published in MacIntosh, 3.8.2
BP 3, fols. 115–20	Paper on complementary nature of reason and revelation	1660s	Hand: D	English	Partly published by M.A. Stewart in <i>Locke Newsletter</i> , 24 (1993), 21–34, on pp. 32–4. Published in full in MacIntosh, 4.6.8
BP 3, fols. 121–3	‘The Motives & reasons occasioning the Roman Catholics of this Kingdome [Ireland] to take upp Armes’ [i.e. in the 1640s]	1640s	Fol. 123 blank except for endorsements Hand: unknown	English	
BP 3, fol. 124	Comments on recent tract entitled ‘An unerrable Church or none, being a rejoinder to the unerrable Church against Dr. Salls reply intituled the Catholick Apostolick Church of England, written by J.S. and dedicated to the Duke of Ormonde’	? 1670s	Hand: unknown	English	See [Ignatius Brown or Browne], <i>An Unerrable Church or None</i> (1678)
BP 3, fol. 125	Material relating to <i>Christ. Virt., II</i>	1680s	Discarded text (one short paragraph) about motives to love God in subsection 4 (‘Applicatory Reflections’),	English	See <i>Works</i> , vol. 12, p. 499

Ref.	Title	Date	Description	Language	Related material
BP 3, fol. 126	List of biblical texts with notes on sources	Late 17th century	later expanded to last eight paragraphs before aphorisms Hand: Greg	English	Revised version published in Francis Brokesby, <i>Some Proposals towards Promoting the Propagation of the Gospel in our American Plantations</i> (London, 1708), pp. 1–3
BP 3, fol. 127–34	‘An Account of Religion in the Plantations drawne up at the Instance of some Gentlemen Members of the Honourable House of Commons, & then presented to the Lord Bishop of Winton ... by Morgan Godwyn Clerke...’	1670s–1680s	Followed by copy of two certificates from ministers in Virginia, one dated 1669, and letter signed William Berkeley, 11 April 1671 Hand: Warr	English	
BP 3, fol. 135–6	Draft of statement for Boyle’s brother stating that Boyle has the right to dispose of certain property of his [the brother’s] administered by Boyle, dated ‘this – day of July 1691’, and index of topics in Twisse’s book against Cotton	c. 1691	Hand: Warr	English	
BP 3, fols. 137–41	Notes on Boyle’s casuistical interviews with Edward Stillingfleet, bishop of Worcester, and Gilbert Burnet, bishop of Salisbury	22 and 27 June 1691	Fol. 147 (a part leaf) is Miles’ cover sheet Hand: Warr	English	Published in M. Hunter, ‘Casuistry in Action’, <i>Journal of Ecclesiastical History</i> , 44 (1993), 80–98, on pp. 94–8; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 87–92

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 3, fols. 142–3	MS version of part of <i>Final Causes</i>	1680s	Section IV, proposition III, paragraphs 31, 28, 29, 38, 33 and most of 42 (conclusion); most of final sentence in conclusion added later. No changes in wording before publication. At the top of fol. 143 are opening lines of paragraphs 34, 36 and 39, showing that these paragraphs preceded the paragraph on this folio, which concluded the section. Written on small sheets, apparently taken from a notebook Hand: Greg	English	<i>Works</i> , vol. 11, pp. 139–45
BP 3, fols. 144–5	Of Prayer	1670s–1680s	Hand: Warr	English	
BP 3, fol. 146	Replacement version of first page of Workdiary 4	1649	Hand: early Boyle	English	Workdiary 4 (replacement version of p. 1) Also published in MacIntosh, 2.3.1 See BP 8, fols. 118–22
BP 3, fol. 147	Latin extract on scripture.	Late 17th century	Hand: ?	Latin	
BP 3, fols. 148–9	Miscellaneous sections of text on theological topics	1670s–1680s	Hand: Bacon	English	Partly published in MacIntosh, 2.1.59, 4.3.2
BP 3, fol. 150	Material relating to tract on atheism or <i>Christ. Virt., II</i>	? 1680s	Six separate paragraphs on various topics	English	See <i>Works</i> , vol. 12 Partly published in MacIntosh, 2.1.60, 3.3.6, 3.4.26
BP 3, fols. 151–60	Incomplete unpublished Latin translation of <i>Seraphic Love</i>	? Post 1663	For more, see BP 6, fols. 246–63 and 275–8. Begins mid-sentence on ‘12’ (fol. 151v), and ends mid-sentence on ‘35’ (fol. 160v); jumps	Latin	<i>Works</i> , vol. 1, pp. 51–133 For Havers see BL 3, fols. 38–9

Ref.	Title	Date	Description	Language	Related material
BP 3, fols. 161–4	‘An Act to remove certain Discouragements & Hinderances of the Conversion of Infidels’	Late 17th century	Copy of Act to stop slaveowners forbidding the baptism of slaves lest they become free, and laying down some rules for treatment of Christian slaves. Large sheets	English	Possibly an abortive Bill read in the House of Lords on 16 Feb. 1674 See also BP 4, fols. 145–7
			Hand: unknown		

Volume 4

Folio-size volume; foliated; 183 folios (52–8 accidentally omitted from foliation). 19th-century contents leaf: Theology.

Ref.	Title	Date	Description	Language	Related material
BP 4, fols. 1–7	Theological notes, including a number of pasted-up slips, dealing with God’s wisdom, piety, miracle, reason and authority, etc.	? 1680s	Fol. 1 is a card cover sheet endorsed by Miles	English	Various items published in MacIntosh, 2.1.6, 49; 2.2.7, 37; 3.3.18; 3.4.12; 3.5.17; 3.6.5, 16–17, 28; 4.2.11; 4.3.3; 4.6.9
			Fol. 2 is an unpublished snippet intended for <i>Christ. Virt., II</i> , comparing discoveries of a naturalist to those of a traveller, endorsed, ‘Notes belonging to the C.V.’ Fol. 4a has the title: ‘Short Notes and Snips of Paper belonging to the U. of A.’ Hand: mainly Bacon		
BP 4, fols. 8–25	‘A Letter to Mr. H. Oldenburg] that may serve for a kind of Preamble to the following first Part of the Design’d Paper viz. about the good Offices	1670s–1680s	Hand: Warr	English	Published in <i>Works</i> , vol. 14, pp. 265–76



Ref.	Title	Date	Description	Language	Related material
	Revelation does to Reason, and also to the 2nd Part about the good Offices Reason may do Revelation'				
BP 4, fols. 26–37	'Livres Touchant le verité de la Religion chretienne'	1670s–1680s	Details of works on truth of Christianity, divided into sections covering successive centuries from the 1st to the 17th; two copies, one comprising fols. 26–7 and 36–7 and the other fols. 28–35, the first imperfect Hands: Bacon, ?	French	
BP 4, fol. 38	Vellum cover sheet entitled, 'Love of God/'The Papers in this case belong to the latter part of the Subsection of the 2d Part of the Christian Virtuoso'	? 1680s	Endorsed by Miles: 'NB: Too short to be used'. Probably unrelated to the section that follows, BP 4, fols. 39–46; apparently separated from the <i>Christian Virtuoso</i> material to which it relates Hands: Bacon, ?	English	See <i>Works</i> , vol. 12
BP 4, fols. 39–46	Pasted-down snippets on various topics, mainly things to 'R[ememb]er to include in various works	1680s	A few endorsed for parts of <i>Christian Virtuoso</i> , others for 'H. of Q.' ( <i>History of Qualities</i> ), etc. Hand: Bacon	English	
BP 4, fols. 47–51	Longer theological notes on such topics as divine truth and importance of Pentecost	1670s–1680s	Hand: Bacon	English	Published in MacIntosh, 2.1.19; 2.3.12; 3.6.4, 14–15, 18, 27
BP 4, fol. 59	Note by Miles on content of printed edition of <i>Usefulness</i> , reused as cover sheet	Mid 18th century	Hand: Miles	English	

Ref.	Title	Date	Description	Language	Related material
BP 4, fols. 60–8	Miscellaneous papers relating to theological treatises by Boyle, including lists of ‘Heads’ for treatises on various topics (fol. 67)	? 1680s	Including fol. 68, an unpublished paragraph relating to <i>Christ. Virt., I, Appendix</i> , part of a speech for Justinus in reply to ‘Torquatus’; although the published version does not have ‘Torquatus’ as an interlocuter, he is mentioned in <i>Works</i> , vol. 12, p. 387. Endorsed for ‘5a’. Copy of BP 5, fol. 99. Copied by Miles in BP 7, fol. 236. Hand: Bacon	English	See <i>Works</i> , vol. 12 Mostly published in MacIntosh, 3.2.14; 3.3.10; 3.7.1, 5; 4.5.6
BP 4, fols. 69–76	Sections of text on reason and religion	1670s–1680s	Hands: Warr, Bacon	English	Mostly published in MacIntosh, 2.1.81–2, 3.7.6, 3.8.1
BP 4, fols. 77–97	Fragments, some pasted down, intended for <i>Christ. Virt., II</i> , and for the tract on atheism	? 1680s	Endorsed by Miles on fol. 97v, ‘Some papers of Xtn Virtuoso I could not make use of’ Unpublished except for (1) fols. 79–80, sentence on the naturalist’s special ability to glorify God, later reworded as opening sentence of subsection 4 (‘Applicatory Reflections’), paragraph 13, and (2) fol. 91, MS version of prop I, sec 2, subsection 4 (‘Applicatory Reflections’), opening paragraph of section on gratitude; no changes. Endorsed by Miles on verso, ‘NB. This belongs to Xtn Virtuoso & is a duplicate see pt 2d propos. I Sect. 2d Subsect. 4.’ Hands: Bacon, Smith (87a)	English	(1) <i>Works</i> , vol. 12, p. 487 (2) <i>Works</i> , vol. 12, p. 491 Other material largely published in MacIntosh, 2.1.1, 52, 68; 2.2.1–2, 10, 28, 47, 53, 66–7; 3.4.3, 5–6, 13, 17, 19, 23, 25, 27–8, 37, 39, 43; 3.5.5–8, 18, 22–3
BP 4, fols. 98–100	MS versions of parts of <i>Christ. Virt., I, Appendix</i>	1686 or later	The first, second, third and fourth summaries. Corrected copy of MS 185, fol. 58v–61. Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 379–81, 402, 421

Ref.	Title	Date	Description	Language	Related material
BP 4, fol. 101	Copy of petition of Archbishop Sancroft and others against Declaration of Toleration [1688]	c. 1688	Hand: Warr	English	
BP 4, fols. 102–3	Memorandum of agreement between Boyle and Robert Everingham for printing of Irish New Testament, and notes ‘concerning printing the Irish Bible for Scotland’	June 1680 and c. 1688	Hands: Everingham, ?	English	Published in R.E.W. Maddison, ‘Robert Boyle and the Irish Bible’, <i>Bull. J. Rylands Library</i> , 41 (1958), 81–101, on pp. 83–4, 98, 100n
BP4, fols. 104–5	‘The order set downe for translating the Bible’	17th century	Evidently the Authorised Version Hand: unknown	English	
BP 4, fols. 106–7	‘An account of the charge of printing, correcting, binding and clasp[ing] 7000 Bibles in the British language in a large octavo’	[1680s]	Hand: Warr	English	
BP 4, fols. 108–11	Copy of the Preface to the Irish New Testament	c. 1681	Hand: Bacon	Gaelic	<i>Tiomna nuadb</i> (London, 1681), sigs. A1–b1.
BP 4, fols. 112–13	Copy of William Daniel’s preface to the Irish New Testament (1602)	17th century	Hand: ?Everingham (see BP 4, fols. 102–3)	English	
BP 4, fols. 114–16	Papers relating to Samuel Chylinski’s translation of the Bible into Lithuanian	1662	Scribal hands	English	See <i>Correspondence</i> , vol. 1, pp. 412–13, vol. 2, pp. 7–11

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 4, fol. 117	‘The case of the dissenting preachers in Wales ...’	Late 17th century	Appeal by dissenting preachers for more financial backing, with list of current preachers, scholars etc. with salaries Hand: unknown	English	
BP 4, fols. 118–20	Two copies of Act of Parliament to encourage conversion of negro slaves in Barbados [1670]	c. 1670	Hands: ?, C	English	
BP 4, fol. 121	Draft letter from Boyle to an unknown correspondent concerning the benefaction of M. Mousche to the New England Company	[c. 1677]	Hand: Warr	English	Published in <i>Correspondence</i> , vol. 4, pp. 484–5
BP 4, fol. 122	‘The Case stated, as it relates to the desire of having one Generall Collection towards carrying on the worke of propagation of the Gospell among the Indians’	Late 17th century	Scribal hand	English	
BP 4, fols. 123–6	Papers relating to the Charter of the New England Company	7 February 1662 and 27 March 1662	Scribal hand	English	Cf. BP 40, fols. 145–7
BP 4, fols. 127–8	‘Proposals for the propagating of the Christian Religion, & converting of Slaves, whether Negroes or Indians, in the English Plantations’	1670s–1680s	Two copies: second copy incomplete Hands: Greg, Bacon	English	See also BP 35, fol. 176



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 4, fols. 129–31	‘Directions to Ministers anent Malignants’	Mid 17th century	Scribal hand	English	
BP 4, fols. 132–5	Papers on case of images in parish church at Moulton, Lincs., 1684	1683 or 1684	With cover sheet endorsed by Henry Miles (fol. 135) Scribal hand, emended by Barlow	English	Thomas Barlow, <i>Several Miscellaneous and Weighty Cases of Conscience</i> (1692)
BP 4, fols. 136–7	Letters of Alexander Henderson to a group of London Puritan ministers reporting on meeting of General Assembly and discussing different forms of church government	Late 17th century		English	Summarised in <i>Correspondence</i> , vol. 6, pp. 423–4
BP 4, fols. 138–43	‘Two Letters. The one of a Learned Bishop explayneing, The other of a private Minister examining that explanation of the Oath enjoyned by the 6th Canon of the Convocation or Synod Anno Domini 1640’	1640	Effectively a scribal version of a pamphlet concerning the notorious etcetera oath	English	Summarised in <i>Correspondence</i> , vol. 6, p. 424
BP 4, fol. 144	Transcript of clause from letter from Council of East India Company to St Helena encouraging baptism of slaves, 9 December 1670	c. 1670	Scribal copy	English	
BP 4, fols. 145–7	Transcript of ‘An Act to remove certain discouragements & hinderances of the conversion of Infidels’	1680s	Hand: Greg	English	Copy of BP 3, fols. 161–4

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 4, fols. 148–9	William Seaman’s proposal for a Turkish/Latin Lexicon	[c. 1670]	Holograph	English	
BP 4, fols. 150–2	Copy of Frederick William of Brandenburg’s ‘Edict of Potsdam’	29 October 1685	Hand: Warr	English	
BP 4, fols. 153–62	‘Omissa et emendanda in Harmonia Evangeliorum’	17th century	List of corrections to German work Hand: unknown	German	
BP 4, fol. 163	Latin catechism	1670s–1680s	Hand: Bacon	Latin	
BP 4, fol. 164–5	Will of [William] Noyes	Mid 17th century	Hand: unknown	Latin	
BP 4, fol. 166	Plan for Boyle lectureship	Late 17th century	Hand: Burnet	English	Discussed in M. Hunter, <i>Robert Boyle by Himself and his Friends</i> (London, 1994), pp. xxiv–xxv
BP 4, fols. 167–74	Theological notebook	Late 17th century	Hand: uncertain	English	
BP 4, fol. 175	Specimens of Hebrew and Arabic, ? by Thomas Hyde	Late 17th century	Hand: Hyde	Hebrew Arabic	Cf. BP 11, fols. 323–4
BP 4, fols. 176–8	Tabular summary of books of Old Testament	? Early 17th century		English	
BP 4, fols. 179–81	Plan for Boyle lectureship	1670s–1680s	Variants of text on fol. 166 Hands: Bacon, Emes	English	Discussed in M. Hunter, <i>Robert Boyle by Himself and his Friends</i> (London, 1994), pp. xxiv–xxv.

Ref.	Title	Date	Description	Language	Related material
BP 4, fol. 182	Latin notes on proper method of understanding scriptures	1670s–1680s	Hand: Bacon	Latin	
BP 4, fol. 183	Card cover sheet, marked ‘Transcrib’d Papers [deleted] Schemes of Natural History’	Late 17th century and mid 18th century	Notes by Miles on content, not related to its current context Hands: ?, Miles	English	

Volume 5  
Folio-size volume; foliated; 112 folios. 19th-century contents leaf: Theology.

Ref.	Title	Date	Description	Language	Related material
BP 5, fols. 1–15	Incomplete set of Miles’ transcriptions of material intended partly for <i>Christ. Virt., I, Appendix</i> but mainly unpublished	1742	More are found in BP 7, fols. 233–41 Includes (1) as paragraph ‘LXIII’ on fol. 3, paragraph XX in ‘Reflections’ ( <i>Christ. Virt., I</i> ). Copy of BP 1, fols. 167–8. (2) Paragraph ‘LXXI’ on fol. 4 is Miles’ copy of BP 1, fols. 77–8 ( <i>Christ. Virt., I, Appendix</i> ) Hand: Miles	English	See <i>Works</i> , vol. 12 (1) <i>Works</i> , vol. 11, pp. 339–40 (2) <i>Works</i> , vol. 12, pp. 414–15 See also BP 7, fols. 233–41
BP 5, fols. 16–34	‘Introduction to my Loose Note Theological’ and related material	1670s–1680s	Various versions of the same text. Fols. 20, 24, 31 and 34 are blank except for endorsements by Wotton and Miles. Cf. Latin translation, BP 2, fols. 191–8 Hands: Bacon, C (fol. 30), B (fol. 33)	English	Published in <i>Works</i> , vol. 14, pp. 277–83. On the various MSS, see <i>Works</i> , vol. 14, p. xxx Material from fols. 32–3 published in MacIntosh, 2.1.8, 13, 21, 43, 48; 3.1.6, 10, 12

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 5, fols. 35–48	Miscellaneous theological notes and fragments, dealing with refutation of atheists, imperfection of human reason, God’s design, advantages of a religion, auxiliary proofs for Christianity, etc.	1670s–	Sections of text on various topics, some	English	For fol. 41 see <i>Works</i> , vol. 11, p. 363, including previously unpublished material Much of the remainder published in MacIntosh, 2.1.55, 67; 2.2.16, 51; 2.3.9; 3.2.2, 8, 16; 3.3.8, 11, 13–14, 16–17, 19–23, 25; 3.4.4, 7; 3.5.11; 4.6.10
		1680s	pasted up and some endorsed as for <i>Christ. Virt., I</i> Fol. 41 is MS version of ‘third fragment’ at end of chapter IV in ‘Greatness’ ( <i>Christ. Virt., I</i> ), first paragraph not published Fol. 42 (part leaf) is a Miles cover sheet Hands: Bacon, Warr (36–7), C (38)		
BP 5, fols. 49–61	Part of ‘On the Diversity of Religions’	1670s–	Fol. 60 endorsed as belonging to this work	English	Fols. 49–59 published in <i>Works</i> , vol. 14, pp. 245–54 Cf. the Latin text in BP 6, fols. 279–91, published in <i>Works</i> , vol. 14, pp. 235–64 Fol. 60 published in MacIntosh, 3.7.7
		1680s	Fol. 61 blank except for endorsements by Miles and Wotton Hands: Bacon, Greg (fols. 51–2)		
BP 5, fols. 62–7	MS version of part of <i>Christ. Virt., II</i>	? 1680s	Proposition II, paragraphs 8–14, minor editorial changes prior to publication Fol. 67 blank except for endorsement by Wotton Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 509–10
BP 5, fols. 68–90	Miscellaneous theological notes and sections of text, on topics including the conversion of infidels, reason and revelation, God’s attributes, etc.	1670s–	Endorsed (fol. 90v) by Wotton: ‘Loose thoughts referable to Christ Virtuoso Hands: Bacon, Smith (fol. 72)	English, French	Much of this material published in MacIntosh, 2.1.27, 69, 72–9, 85, 87–8, 91, 93; 2.2.4, 6, 8–9, 11; 2.3.5, 7, 20, 28; 3.1.4, 11; 3.2.7; 3.3.7, 12, 24, 3.6.10, 21, 24, 26; 3.7.2–4; 4.5.7
		1680s			
BP 5, fols. 91–2	Material relating to <i>Christ. Virt., II</i>	? 1680s	Endorsed, ‘Aphorisms at the end of CV’. Six unpublished aphorisms intended for the end of the treatise Hand: Bacon	English	Published in <i>Works</i> , vol. 12, pp. lxvi–vii. Also mostly published in MacIntosh, 2.1.51, 70–1, 89; 4.2.10



Ref.	Title	Date	Description	Language	Related material
BP 5, fol. 93	MS version of part of <i>Christ. Virt., II</i>	c. 1690	Entitled 'The Heads of the six Propositions that make up the Second Part of the Christian Virtuoso'; however, the heads themselves are not included here. MS version of the paragraph immediately following the list of six propositions at the start of the treatise Hand: Bacon	English	<i>Works</i> , vol. 12, p. 432
BP 5, fol. 94	Material relating to <i>Christ. Virt., II</i>	1691	Boyle's notes on the contents and whereabouts of the second part of the <i>Christian Virtuoso</i> . Fol. 94r copied out in BP 1, fol. 54; additional comments on fol. 94v comparing this book to <i>Style of the Scriptures</i> not copied. For original version, see MS 187, fols. 94–6 Hand: Bacon	English	Published in <i>Works</i> , vol. 12, pp. lxxv–lxxvi
BP 5, fols. 95–8	Sections of text, some pasted down, intended for <i>Christian Virtuoso</i> or tract on atheism	? 1680s	Many endorsed for '3d Cf.', etc. Hand: Bacon	English	Many published in MacIntosh, 2.1.45, 47; 2.3.14; 3.4.8, 31; 3.5.24; 4.2.5
BP 5, fols. 99–104	Material relating to <i>Christ. Virt., I, Appendix</i>	? 1680s	Passages for third conference, incl. two published passages: (i) Fol. 99 is an unpublished paragraph, part of a speech for Justinus in reply to 'Torquatus'. Copied in BP 4, fol. 68 (ii) Fol. 101 is copy of BP 2, fol. 55, with minor changes (iii) Fol. 104 is MS version of opening paragraph in conference III, argument II, no changes. Endorsed, 'Preamble 3 Conf. 2d Arg' Hands: Greg, Bacon, corr. by Boyle	English	(iii) <i>Works</i> , vol. 12, pp. 397–8, 383 For fols. 100, 102 see MacIntosh, 2.2.44, 3.3.15

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 5, fols. 105–10	Further sections of text dealing with truth of Christianity, God’s attributes, etc.	1670s–1680s	Hand: Bacon	English	Many published in MacIntosh, 2.1.3; 3.5.25; 3.8.3
BP 5, fols. 111–12	Miles’ cover sheet and list of contents	Mid 18th century	Hand: Miles	English	

Volume 6

Folio-size volume; foliated; 374 folios. 19th-century contents leaf: Theology.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 6, fols. 1–48	Unpublished Latin translation of <i>Things above Reason</i>	1680s	Includes both ‘Discourse’ and ‘Advices’ Hand: M	Latin	<i>Works</i> , vol. 9, pp. 361–424
BP 6, fols. 49–77	‘Dissertatio IV. quo in sensu Religio Christiana rationi conformis sit, et quo in sensu eidem contraria dici possit’, ‘Dissertation IV. In what sense Christianity conforms to reason and how it may be said to be contrary to it’	1670s–1680s	On fol. 49 is the title ‘Religio Christiana rationi quo sensu conformis’, ‘How the Christian Religion conforms to Reason’: for the relationship of this to the text, see <i>Works</i> , vol. 14, p. xxvii Hand: M	Latin	Published in <i>Works</i> , vol. 14, pp. 173–218
BP 6, fols. 78–155	Latin texts responding to Roman Catholic attacks on Edward Stillingfleet’s <i>Discourse concerning the Idolatry practised in the Church of Rome</i> (1671)	1673	Comprising: (i) Preface and contents-list, fols. 78–83 (ii) ‘Examinatio Libelluli, qui inscribitur Dr. Stillingfleetus adversus Drem. Stillingfleetum’, unpublished tract replying to [John Warner] <i>Dr Stillingfleet</i>	Latin	

Ref.	Title	Date	Description	Language	Related material
			<i>against Dr Stillingfleet or, the Palpable Contradictions committed by Him in charging the Roman Church with Idolatry, Danger of Salvation in her Communion, Fanaticisme, and Divisions in Matters of Faith</i> (1671), fols. 84–107 (iii) ‘Responsio ad Libellum qui intitulatur, Principia Dris. Stillingfleeti considerata’, reply to [Abraham Woodhead], <i>Stillingfleets Principles, Giving an Account of the Faith of Protestants, Considered by N.O.</i> (1671), fols. 108–55 Hand: Warr sen		
BP 6, fols. 156–81	Unpublished Latin translation of <i>Reason and Religion</i>	1680s	Lacks publisher’s note and preface Hand: M	Latin	<i>Works</i> , vol. 8, pp. 233–94
BP 6, fols. 182–96	Unpublished Latin translation of ‘Reflections on a Theological Distinction’ ( <i>Christ. Virt., I</i> )	c. 1690	Missing Advertisement and first line of main body Hand: M	Latin	<i>Works</i> , vol. 11, pp. 329–44
BP 6, fols. 197–220	Unpublished Latin translation of ‘Greatness of Mind’ ( <i>Christ. Virt., I</i> )	? 1680s	Hand: Ramsay	Latin	<i>Works</i> , vol. 11, pp. 345–66
BP 6, fols. 221–45	‘De Natura Gratiae efficacis Ad Amicum Dissertatio’	Late 17th century	Latin treatise Hand: unknown	Latin	
BP 6, fols. 246–63	Unpublished Latin translation of <i>Seraphic Love</i>	1660s	Incomplete (for more, see BP 3, fols. 151–60): begins with ‘Charissimo Lindamor’ on ‘8’ (fol. 246), ends abruptly on ‘11’ (fol. 247v). Followed by sections missing from the above: ‘28’ (fol. 248r) to ‘31’ (fol. 249v), ‘36’ (fol. 250r) to ‘55’ (fol. 259v), then ‘57’ (fol. 260r) to ‘63’ (fol. 263r). Nothing missing between ‘55’ and ‘57’, simply a jump	Latin	<i>Works</i> , vol. 1, pp. 51–133 For a further section, see BP 3, fols. 151–60. For the translation of dedicatory letter, see BP 6, fols. 275–8. For Havers see BL 3, fols. 38–9

Ref.	Title	Date	Description	Language	Related material
			in pagination. Ends with the closing lines of the main text; does not include the ‘Occasional Reflection’ Hand: Havers		
BP 6, fols. 264–74	Another unpublished Latin translation of ‘Reflections’	c. 1690	Many corrections, missing Advertisement Hand: L	Latin	<i>Works</i> , vol. 11, pp. 333–44
BP 6, fols. 275–8	Unpublished Latin translation of dedicatory epistle to <i>Seraphic Love</i> (to the Countess of Warwick) and ‘Monita ad Lectorem’	1660s [post 1663?]	Title page (fol. 275) shows that Henry Herringman (London) was to have been the printer, though no date is given Hand: Havers	Latin	See <i>Works</i> , vol. 1, pp. 53–6 See also BP 6, fols. 246–63 For Havers see BL 3, fols. 38–9
BP 6, fols. 279–91	‘Quod Diversitate ac Multitudine Religionum Prudentior Christianus Commoveri Nullus Debeat’, ‘That a Wise Christian should not be disturbed by the number and diversity of religions’	1670s or 1680s	Title on fol. 279: ‘de diversitate Religionum’, ‘On the Diversity of Religions’ Hand: M	Latin	Published in <i>Works</i> , vol. 14, pp. 235–64 For the English text of part of this treatise, see BP 5, fols. 49–59
BP 6, fols. 292–5	<i>Christ mediateur</i>	Late 17th century	Incomplete treatise in French on the royalty and prophetic role of Christ and the ‘Epître de St. Paul aux Hebreux’ Hand: unknown	French	
BP 6, fols. 296–331	‘Considerations, and other Thoughts, layd together, and to be rang’d, enlarg’d, & corrected, in order to a short Tract of the Causes and Cure of Atheisme’	1670s	Text on causes and remedies of atheism, including observations on what makes men atheists, their vulnerabilities, and how to convert them; hindrances in our imperfect minds understanding God.	English	Published in MacIntosh, 1.2



Ref.	Title	Date	Description	Language	Related material
Continuous pagination. Hands: Slare, Warr, B					
BP 6, fols. 332–61	Unpublished French translation of <i>Style of the Scriptures</i>	Late 17th century	Hand: uncertain	French	<i>Works</i> , vol. 2, pp. 379–488
BP 6, fols. 362–74	‘De La Metaphysique ou des Substances intelligentes’	Late 17th century	part 1 of French philosophical tract Hand: unknown	French	

Volume 7  
Folio-size volume; foliated; 296 folios. 19th-century contents leaf: Theology.

Ref.	Title	Date	Description	Language	Related material
BP 7, fols. 1–94	‘Essay of the Holy Scriptures’	Early 1650s	Substantial section of this unpublished treatise (the rest is now lost, except the section printed by Birch, for which see <i>Works</i> , vol. 12, pp. 355–8). Some material overlaps with <i>Style of the Scriptures</i> , and some with <i>Reason and Religion</i> . Hand: uncertain	English	Published in <i>Works</i> , vol. 13, pp. 173–223 For passages overlapping with <i>Style of the Scriptures</i> , see <i>Works</i> , vol. 2, pp. 400ff., 405–6, 408–10, 421f, 425ff. For passages overlapping with <i>Reason and Religion</i> , see <i>Works</i> , vol. 8, pp. 267, 302, 304ff
BP 7, fols. 95–104	Sections of text concerning miracles	1670s–1680s	Hand: Bacon	English	Published in MacIntosh, 3.6.29
BP 7, fols. 105–17	‘Some Considerations about Miracles, as they are pleadable for the Christian Religion’ (pencil title)	1680s	A passage about the laws of nature from fol. 113 was copied out on BP 1, fol. 169d (and printed as paragraph 10 in Occasional Thoughts at end of fourth conference, <i>Christ</i> .	English	Published in R.L. Colie, ‘Spinoza in England 1665–1730’, <i>Proc. of the Amer. Philos. Soc.</i> , 107 (1963), 183–219, on pp. 211–16 (where

Ref.	Title	Date	Description	Language	Related material
			<i>Virt., I, Appendix), Works</i> , vol. 12, p. 423 Hands: Warr (fols. 105–11), Bacon		misattributed to BP 3), and in MacIntosh, 3.6.1, 3, 13. Some material copied from MS 198, fols. 120–1, MS 199, fols. 137v–8
BP 7, fols. 118–19	Further paper dealing with various aspects of miracles	1670s–1680s	Hand: Smith	English	Published in MacIntosh, 2.1.17 Copied from MS 185, fols. 250–8
BP 7, fols. 120–3	Section of text on miracles	1670s–1680s	Hand: Warr	English	Published in R.L. Colie, ‘Spinoza in England 1665–1730’, <i>Proc. of the Amer. Philos. Soc.</i> , 107 (1963), 183–219, on pp. 218–19 (where misattributed to BP 3), and in MacIntosh, 3.6.30
BP 7, fols. 124–5	A further text on miracles	1660s	Hand: G	English	Published in MacIntosh, 3.6.12.
BP 7, fols. 126–7	Dedicatory epistle to <i>Customary Swearing</i>	c. 1647	Fragment of dedicatory epistle to Countess of Kildare, ends mid-sentence on fol. 127v Hand: early Boyle	English	Published in <i>Works</i> , vol. 12, pp. xxxix–xlii
BP 7, fols. 128–33	‘Scripture Reflections’	Late 1640s [after May 1647]	Two decades, with the only the heading for a third decade. Misbound; should be in the order 128, 132, 131, 129–30. Endorsed (fol. 133r): ‘To my Lady Penelope Brooke’. Revised version of the scriptural material from BP 14, fols. 1–14, omitting other items, including two that were printed in <i>Occasional Reflections</i> , and with two further reflections not copied from there Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 99–112 For the items printed earlier, see <i>Works</i> , vol. 5, pp. 85, 87
BP 7, fols. 134v–50	Dialogue on good and evil spirits.	Late 17th century	Preceded (fols. 134v-5) by arguments on either side Hand: uncertain	English	. Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 310–17

Ref.	Title	Date	Description	Language	Related material
BP 7, fols. 151–70	‘Some Theologicall notes of my owne. Belong to the observations about some causes of Atheism’	c. 1680	A continuous series of brief passages (many copied as snippets in BP 1 and BP 2) marked for use in various works, incl. some for ‘T above R’ and ‘Advices’. None published in this form, but some overlapping with published version of <i>Things above Reason</i> as follows:	English	(i) <i>Works</i> , vol. 9, pp. 402–4
			(i) Fol. 155v similar to 1st paragraph of ‘Third Advice’		(ii) <i>Works</i> , vol. 9, pp. 409–10
			(ii) Fol. 157c, d, and g similar to 10th paragraph of ‘Fourth Advice’		(iii) <i>Works</i>, vol. 9, pp. 398–9; vol. 12, p. 398
			(iii) Fols. 162v(b) and 169c similar to part of first sentence of 6th paragraph of ‘First Advice’. Also used in <i>Christ. Virt., I, Appendix</i> .		Much of this material published in MacIntosh, 2.1.9, 33, 40, 53, 56–7; 2.2.3, 5, 12, 14, 30, 39–41, 48–9; 2.3.3, 8, 11, 18, 26–7, 31; 3.1.1, 7, 8; 3.2.3; 3.3.9; 3.4.1, 20, 32, 38; 3.5.9, 16, 19, 26; 3.6.9; 3.8.6, 12; 4.2.1; 4.5.1, 3, 8
			Fol. 170 blank except for endorsement		
			Hand: B		
BP 7, fols. 171–6	‘Cave, Cave, Cave’	1603	Hand: uncertain	English	Text evidently by John Beale
BP 7, fols. 177–82	‘Queries against Religion by Mr Hobbes, with Answers to them’	Late 17th century	Title from Wooton’s endorsement	English	
			Hand: uncertain		
BP 7, fols. 183–5	MS version of part of <i>Christ. Virt., I</i>	1670s or later	Two paragraphs near the end of proposition II, missing a paragraph interpolated later Hand: Smith	English	<i>Works</i> , vol. 11, pp. 318–20, 321–2
BP 7, fols. 186–93	‘Post-script’ to <i>Notion of Nature</i>	c. 1680	Endorsed ‘The 1 Section’ Hands: B, addns by C	English	Published in <i>Works</i> , vol. 14, pp. 147–55.

Ref.	Title	Date	Description	Language	Related material
BP 7, fols. 194–215	Prefatory material to work on truth of Christian religion, dealing with its scope, method and style	1670s–1680s	Hand: Warr	English	Largely published in MacIntosh, 2.1.4–5, 7, 15; 2.2.15; 3.8.4; 4.2.6
BP 7, fols. 216–32	Thomas Barlow’s animadversions on E. Lydeott, <i>The Prodigal Return’d Home</i> (1684), and an ancillary text	c. 1684	Scribal copy and transcript by Bacon of Barlow’s critique of a Catholic convert’s vindication of himself, together with a further rebuttal of a convert’s justification of his decision (fols. 222–6) Hands: Bacon; scribal hand, with addns by Barlow	English	Fols. 222–6 are derived from a text of which another version survives in Queen’s College, Oxford, MS 266, item 6 (fols. 78–89), fols. 83 and 86v–9
BP 7, fols. 233–46	Transcript by Miles of theological material by Boyle, including material relating to <i>Reason and Religion</i>	Mid 18th century	Especially from BP 1, fols. 148–62, and BP 4, fols. 8–25 and 60ff. Fol. 236, Paragraph ‘VII’, a copy of BP 4, fol. 68, relates to <i>Christ. Virt., I, Appendix</i> Hand: Miles	English	See <i>Works</i> , vols. 8, 12. Fol. 241 published by MacIntosh as 2.1.66
BP 7, fols. 247–52	Further copies of theological notes in hand of Miles, including ‘Some Considerations about The Idea of a Being Infinitely Perfect’	Mid 18th century	Some copied from BP 2, fols. 8–25, 148–62. Cf. related material by Miles in BP 5 Hand: Miles	English	Published in MacIntosh, 2.2.38, 2.3.29
BP 7, fols. 253–60	MS version of part of <i>Christ. Virt., II</i>	? 1680s	Proposition I, section I, paragraphs 4–10 Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 436–40
BP 7, fols. 261–8	MS version of part of <i>Christ. Virt., I</i>	1688 or later	Revised version of paragraphs I to XVIII in ‘Reflections upon a Theological Distinction’, missing most of final sentence, a few changes and deletions before publication. Endorsed by Miles ‘Part of the Discourse of the	English	<i>Works</i> , vol. 11, pp. 333–7



Ref.	Title	Date	Description	Language	Related material
Things above & contrary to Reason' Hand: Bacon, corr. by Boyle					
BP 7, fols. 269–87	'The Dayly Reflection'	? Late 1640s	Hand: early Boyle	English	Published in J.T.Harwood, <i>Early Essays and Ethics</i> (1991), pp. 203–35 Copy of opening section in BP 35, fols. 172–3
Biographical account based on Bible. Memoranda, inc. petitions by John Jay, on fol. 290v Hand: early Boyle					
BP 7, fols. 288–90	'The Life of Joash'	Late 1640s		English	Published in <i>Works</i> , vol. 13, pp. 120–5
Text concerning importance of getting to know oneself Hand: early Boyle					
BP 7, fol. 291	'Self-Conversation'	Late 1640s		English	Published in <i>Works</i> , vol. 13, pp. 126–8
Hand: unknown					
BP 7, fols. 292–3	'Question Whether poligamy be in any Case lawfull under the Gospel'	17th century		English	
Hand: unknown					
BP 7, fols. 294–6	Notes on content of 'Epistolae ad Hebraeos'	17th century		Latin	

Volume 8

Folio-size volume; foliated; 212 folios. 19th-century contents leaf: Philosophy.

Ref.	Title	Date	Description	Language	Related material
BP 8, fol. 1	Contents of the (as yet) unpublished parts of <i>Usefulness</i> , endorsed by Henry Oldenburg as having been received by him on 25 April 1666	25 April 1666	For a revised version, see BP 10, fol. 94, and BP 38, fol. 20c Hand: F	English	Revised version published in <i>Works</i> , vol. 13, pp. lxix–lxx See also Joseph Glanvill, <i>Plus Ultra</i> (London, 1668), pp. 104–6
BP 8, fols. 2–28	‘Essay III Containeing a further Declaration of the Usefullnes of Naturall Philosophy by manifesting that Physiologie much conduces to promote the Empire of Man over the Creatures’	1650s or early 1660s	Original version of ‘Essay III’ of <i>Usefulness</i> . Original foliation, 1–26. This forms the basis of the first four essays in the published text of <i>Usefulness</i> , II, sect. 1, though extensive interpolation later occurred. Fols. 15–19, on Helmont’s Duelech, did not appear in the published version Hand: angular 1650s; addns in rounded 1650s	English	<i>Works</i> , vol. 3, pp. 295–355 Fols. 15–19 published in <i>Works</i> , vol. 13, pp. 291–5 See also BP 10, fols. 121–2; BP 17, fols. 108–11
BP 8, fols. 29–45	‘Notes upon the 27th Section’	1660s	Unpublished MS. Includes early version of passage about the Earl of Mount-Alexander in ‘Porousness of Animal Bodies’ in <i>Porosity</i> (fol. 40v). Fol. 45 is a cover sheet endorsed ‘Papers belonging to the XVth Tract’ (ink) and ‘About Pores and Figures’ (pencil) Hand: G	English	Published in <i>Works</i> , vol. 14, pp. 75–87 For the overlapping <i>Porosity</i> passage, see <i>Works</i> , vol. 10, pp. 121–2
BP 8, fol. 46v	Untitled list of heads on porosity	1660s	MS version of list of propositions, just the first of which (‘That the generality of Solid Bodys are not destitute of Pores’) is discussed in ‘Porousness of Solid Bodies’, chapter I Hand: G	English	See <i>Works</i> , vol. 10, pp. 131–2

Ref.	Title	Date	Description	Language	Related material
BP 8, fols. 47–59	Fragment of original version of <i>Usefulness</i>	Early 1660s	Original pagination 122–34. Discursive remarks about various chemical and pneumatical experiments and their usefulness to naturalists. Endorsed (fol. 59v): ‘Loose Papers to be us’d about the 4th Essay’ Hands: D, rounded 1650s	English	Published in <i>Works</i> , vol. 13, pp. 296–305
BP 8, fol. 60	Title and first two paragraphs of ‘Essay the VIII: That a Ground of expecting Considerable things from Experimental Philosophie is given by those things which have bin found out by illiterate Trades-men or lighted on by chaunce’ ( <i>Usefulness</i> )	Early 1660s	Hand: F	English	Published in <i>Works</i> , vol. 13, p. 344
BP 8, fol. 61	Material relating to <i>Usefulness</i>	Early 1660s	(1) Further unpublished fragment of original version of the work, p. 66 (2) Fol. 61v: Passage marked for insertion, partly published in fifth paragraph of section II in ‘Naturalist’s Insight into Trades’ Hand: rounded 1650s	English	(1) Published in <i>Works</i> , vol. 13, p. 296 (2) <i>Works</i> , vol. 6, p. 473
BP 8, fols. 62–3	Cover sheets. Fol. 62v endorsed ‘Rough Papers belonging to the Vth Essay’; fol. 63, ‘Promiscuous Addenda to my severall Treatises’ [Title-page of Workdiary 22]	Late 1660s	Fol. 62r blank Hand: ?E	English	Workdiary 22

Ref.	Title	Date	Description	Language	Related material
BP 8, fol. 64v	‘The Order of My Severall Treatises’	c. 1665	Hand: F, with addns in G	English	See <i>Works</i> , vol.14, pp. xl–xli, 331–2. This version printed in Rose-Mary Sargent, <i>The Diffident Naturalist</i> (Chicago, 1995), p. 140 See also BP 22, p. 60; BP 35, fol. 189; BP 36, fols. 74, 91, 114
BP 8, fols. 65–91	‘Promiscuous Addenda to my severall Treatises’ [Workdiary 22, part 1]	Late 1660s–early 1670s	Copies of extracts from books, etc., mostly on geographical and natural phenomena Hands: E, F, G, Q, R, Slare, unidentified	English, Latin	Workdiary 22, part 1 The following entries were used in books by Boyle: 22–1, 2 (fol. 65), <i>Mechanical Qualities, Works</i> , vol. 8, pp. 336–7 22–3 (fol. 65), <i>Effluviiums, Works</i> , vol. 7, p. 243 22–16 (fol. 70v), <i>Languid Motion, Works</i> , vol. 10, p. 279 22–48 (fol. 75), <i>Mechanical Qualities, Works</i> , vol. 8, p. 504 22–72a (fol. 85v), <i>Absolute Rest in Bodies, Works</i> , vol. 6, pp. 204–5 See also BP 8, fols. 92–116
BP 8, fols. 92–116	‘A Continuation of (Printed) Addenda to my severall Treatises’ [Workdiary 22, part 2]	Late 1660s–early 1670s	Extracts, in English, Latin, French, and Italian, mostly on natural phenomena, some from Purchas’s <i>Pilgrimes</i> (1625) Hands: E, F, G, Q, R, Slare, Bacon, Greg, unidentified	English, Latin, French Italian	Workdiary 22, part 2 The following entries were used in books by Boyle: 22–124 et seq. (fols. 94v–8), <i>Languid Motion, Works</i> , vol. 10, p. 336. 22–202 (fols. 114v–5), <i>Languid Motion, Works</i> , vol. 10, pp. 294–5 See also BP 8, fols. 65–91



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 8, fol. 117	List of Raymond Lull's books	c. 1680	Hand: A	English	
BP 8, fols. 118–22	'A Diurnall Miscellaneous Collection, Begun March the 25th 1648/9' [Workdiary 4]	1649	Aphorisms in English, largely from <i>Parthenissa</i> by Roger Boyle, Lord Broghill Hand: early Boyle	English	Workdiary 4 A replacement version of the first page is in BP 3, fol. 146
BP 8, fols. 123–39	'Of the Study of the Booke of Nature, For the first Section of my Treatise of Occasionall Reflections'	1650s	Original pagination survives. Pp. 128–32 out of order: correct order should be 128, 131, 132, 130, 129 Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 145–72 Some overlap with <i>Usefulness I</i> . For the chief areas of overlap with the published text, see <i>Works</i> , vol. 13, p. xxxviii
BP 8, fols. 140–8	'A Philosophical Diary. Begun this First of January 1654/5' [Workdiary 12]	1655	Recipes with marginal dates ranging from 'Jan 9' to 'Febr 9'. Informants include Clodius, Starkey and Digby Hand: uncertain	English	Workdiary 12
BP 8, fols. 149–52	MS version of part of <i>Notion of Nature</i>	1660s	Section V, arguments 1–3. Originally intended to be section 'III', Boyle changed this to 'IIII', which is printed with that numeration but headed 'Section V'. Also, the 'IIII' arguments he had intended to include were expanded to 'five' in the printed text. Some changes of wording when printed. MS ending printed only in Latin edition Hand: K, with slight changes in another hand (fol. 151)	English	<i>Works</i> , vol. 10, pp. 483–7 Same as BP 10, fols. 103–6, but this is a later copy
BP 8, fols. 153–9	MS version of part of <i>Excellency of Theology</i>	1660s	Most of section I of the second part. Much reworked, but final wording nearly the same as published text; third paragraph and part of	English	<i>Works</i> , vol. 8, pp. 55–60

Ref.	Title	Date	Description	Language	Related material
BP 8, fols. 160–4	Fragment of ‘Dialogue on the Transmutation and Melioration of Metals’	c. 1680	fourth omitted. Ends abruptly with catch-word on bottom of fol. 159, in middle of final paragraph	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 264–9 (accidentally identified as from BP 7; the location is correctly given on p. 233)
			Hands: E (fols. 153–54) and F (155–59)		
BP 8, fols. 165–70	Sections of ‘An Essay of various Degrees or kinds of the Knowledge of natural things’ interspersed with material on sense, reason and authority (fols. 167–8)	1670s–1680s	Fol. 164 is a fair copy of the first part of the text	English	
			Hand: B		
BP 8, fol. 171	Early version of publisher’s note to <i>Degradation of Gold</i>	1677–1678	Hands: B, Warr	English	Lacking several sentences from published text Hand: C
					<i>Works</i> , vol. 9, pp. 5–6 See also L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 288–9.
BP 8, fols. 172–9	MS version of experiment XVIII in <i>Spring, 1st Continuation</i>	1660s	Missing only final paragraph, but with two paragraphs on fols. 173–4 which were not published	English	<i>Works</i> , vol. 6, pp. 78–83, including hitherto unpublished material
			Hand: J, some corrections by Boyle		
BP 8, fols. 180–3	Unpublished Latin translation of part of <i>Exp. &amp; Obs. Physicae</i>	Late 17th century	Ch. 1, experiments I–XV (final paragraph missing; title of ‘Exp: XII’ in wrong place; should be two paragraphs later). Continuing the translation in BP 9, fols. 164–5. Hand: ?	Latin	<i>Works</i> , vol. 11, pp. 378–84 Cf. BP 9, 164–5

Ref.	Title	Date	Description	Language	Related material
BP 8, fols. 184–7	Sections of ‘An Essay of various Degrees or kinds of the Knowledge of natural things’ interspersed ‘Explications by real Qualities and substantial Formes’ (fol. 186)	1660s–1680s	Hands: Smith, N, Bacon	English	Fol. 187 published in MacIntosh, 2.2.27. See also MS 185, fols. 32v–7
BP 8, fols. 188–9	Extract from Wallis’ <i>Opera Mathematica</i> concerning Euclid	Late 17th century	Hand: uncertain	Latin	Wallis, <i>Opera Mathematica</i> (1693–9) See also BP 10, fols. 2–3, 65–6
BP 8, fols. 190–5	MS version of section 7 of Essay I of <i>Usefulness, II, sect. 2</i>	1660s; 1650s or early 1660s (fols. 192A–3)	Incorporating material from an earlier recension, paginated ‘65’ (fols. 192A–3); printed text has some other additions, including text from BP 10, fol. 93 Hands: F, rounded 1650s (fols. 192A–3)	English	<i>Works</i> , vol. 6, pp. 432–5
BP 8, fols. 196–203	Latin treatise attacking van Helmont in favour of Paracelsus	Late 17th century	Hand: ?	Latin	See also BP 10, fols. 123–6
BP 8, fol. 204	Text concerning ‘judiciary astrology’ and celestial influences	1660s	Hand: E	English	
BP 8, fol. 205	Copy of first three paragraphs of published text of ‘General Heads for the Natural History of a Country’ ( <i>Phil. Trans.</i> , 1666)	1670s–1680s	Text goes as far as ‘To the first’ Hand: Bacon	English	<i>Works</i> , vol. 5, p. 508
BP 8, fols. 206–7	‘A Fragment of <i>The Aspiring Naturalist</i> (A Philosophical Romance)’	1670s–1680s	Hand: Bacon	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 8, fols. 208–9	List of scientific projects/ desiderata	Late 17th century	Hand: uncertain	English	
BP 8, fols. 210–12	Sections of text, including introductory comments to ‘Cogitationes Physicae’	1670s– 1680s	Hand: Bacon	English	

Volume 9

Folio-size volume; foliated; 252 folios. 19th-century contents leaf: Philosophy.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 9, fols. 1–12	Sections of text relating to essay on experience, reason and authority, and ancillary items	1670s– 1680s	Fol. 2 comprises various lists of topics, including (on verso) a list of experiments ‘To the XXII Tract’ Hands: Bacon, C (fol. 2v)	English	
BP 9, fols. 13–16	Parts of the ‘Essay of the Discernment of Suppositions’	1670s– 1680s	‘Heads’ on fol. 15. Fol. 16 blank Hand: Bacon	English	
BP 9, fols. 17–18	Further material relating to essay on experience, reason and authority	1670s– 1680s	Hand: Bacon	English	
BP 9, fols. 19–21	Prescriptions for the organization of science, etc.	1670s– 1680s	Hand: Bacon	English	
BP 9, fol. 22	List of things to remember.	1670s– 1680s	Hand: Bacon	English	



Ref.	Title	Date	Description	Language	Related material
BP 9, fols. 23–4	Prefatory statements relating to 1670s– to ‘Observations about the Use 1680s of Reason in Natural Philosophy’	1670s– 1680s	Hand: Bacon	English	
BP 9, fol. 25	Propositions on sense, reason and authority	1670s– 1680s	Hand: Bacon	English	Published in R. S. Westfall, ‘Unpublished Boyle Papers relating to Scientific Method. II’, <i>Annals of Science</i> , 12 (1956), 103–17, on pp. 113–16 and in MacIntosh, 2.1.28
BP 9, fols. 26–9	Sections of text, mainly prefatory material to various works	1670s– 1680s	Fol. 27 is a description of the working of a watch Fol. 28 set out as letter. Fol. 29 is a fair copy of BP 9, fol. 95 Hand: Bacon	English	Fol. 29 published on p. 199, above
BP 9, fols. 30–4	Material intended for ‘The Uses and Extent of Experience, Reason and Authority in Natural Philosophy’	Late 17th century	Fols. 30r, 31v, 32 33v and 34r blank Hand: Bacon	English	Fol. 30v (which substantially overlaps with BP 10, fol. 127) published in Rose-Mary Sargent, <i>The Diffident Naturalist</i> (Chicago, 1995), p. 164.
BP 9, fols. 35–41	Material relating to appendix to <i>Final Causes</i> , interspersed with section of text on use of experiment (fols. 38–9)	1688 or later	Fols. 35–7, 40–1 comprise fair copies of sections of intended Appendix, copied from MS 185, fols. 29–31, and MS 191, fols. 110–16 Hand: Bacon	English	Published in <i>Works</i> , vol. 14, pp. 167–9 See also BP 9, fol. 129
BP 9, fol. 42	MS version of part of <i>Christ. Virt., I, Appendix</i>	1686 or later	Fourth summary, missing point 4 Corrected copy of MS 185, fol. 58, slightly different from BP 4, fol. 99v Hand: Bacon, addn by Boyle	English	<i>Works</i> , vol. 12, p. 421

Ref.	Title	Date	Description	Language	Related material
BP 9, fols. 43–4	‘A Fragment of the Aspiring Naturalist: A Philosophicall Romance’	Late 17th century	Cf. BP 8, fols. 206–7 Hand: Bacon	English	
BP 9, fols. 45–8	Prefatory material to <i>Paralipomena</i>	1670s–1680s	Fol. 47 is a fair copy based on the draft in BP 38, fol. 34. Fol. 48 blank Hand: Bacon	English	Cf. BP 25, pp. 217–19; BP 36, fol. 14; BP 38, fol. 34. See chapter 4, where fol. 47 is published on p. 180
BP 9, fols. 49–60	Miscellaneous papers, including sections of text relating to imperfections of natural history, use of experiments, etc., and lists of ‘Probatory’ and ‘Exploratory’ Experiments (fol. 52)	Late 17th century	Fols. 53 and 58 are copies of fol. 51, prescriptions for solving ‘a Practical Problem’. Fol. 57 blank except for endorsements Hand: Bacon, etc.	English	Fol. 52 published in Rose-Mary Sargent, <i>The Diffident Naturalist</i> (Chicago, 1995), p. 173
BP 9, fol. 61	Material relating to <i>Usefulness</i>	? 1680s	Endorsed: ‘This belongs to the Essay of the unpublished part of the Usefulness’ Hand: Bacon	English	Published in <i>Works</i> , vol. 13, p. 345
BP 9, fols. 62–75	Further material relating to the use of reason and experience in natural philosophy, interspersed with miscellaneous papers, including ‘Advertisement’ to ‘Cogitationes Physicae’ (fol. 68) 1680s	1670s–	Hand: Bacon	English	Fol. 68 is copied from MS 186, fols. 123–4
BP 9, fols. 76–7	MS version of preface to <i>General History of Air</i>	c. 1680 or later	As published, except final paragraph. For earlier version, see BP 26, fols. 222–3. For another copy, see BP 26, fols. 26–7. Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 9–10

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 9, fol. 78	Note on experiment concerning water from a ‘Martial Spring’	Late 17th century	Dated ‘July 27’, no year Hand: Bacon	English	Published on pp. 168–9 above
BP 9, fol. 79	Preface to work on magnetism of earth	1670s–1680s	Hand: Bacon	English	
BP 9, fol. 80	List of ‘Experiments about Qualitys’	1670s–1680s	Hand: Bacon	English	
BP 9, fols. 81–2	‘A description of the true Thermometer’	1670s–1680s	Unpublished MS Hand: Bacon	English	Copy of BP 25, pp. 245–8
BP 9, fols. 83–91	Miscellaneous sections of text and lists	1670s–1680s	Hands: Bacon, Smith	English	
BP 9, fols. 92–5	Copies of papers surviving elsewhere in volume	1670s–1680s	Fols. 92–3 is a copy of BP 9, fols. 69–70. Fols. 94–5 are drafts of the texts in BP 9, fols. 28–9. Hand: Bacon	English	
BP 9, fols. 96–128	Further material relating to the use of reason and experience in natural philosophy, including pasted-up slips, and interspersed with miscellaneous papers	1670s–1680s	Fol. 128 blank Hands: Bacon, Greg	English, French, Latin	The first paragraph of fol. 105 is a fair copy of the last paragraph of BP 38, fol. 9
BP 9, fol. 129	Material relating to appendix to <i>Final Causes</i>	1688 or later	Fol. 129 is slightly revised copy of fol. 35 Hand: Bacon, corr. by Boyle	English	Published in <i>Works</i> , vol. 14, p. 168

Ref.	Title	Date	Description	Language	Related material
BP 9, fols. 130–61	Incomplete Latin theological essay	Late 17th century	Hand: Warr sen	Latin	
BP 9, fols. 162–3	Part of unpublished ‘Essay XIII’ of <i>Usefulness</i>	1660s	Endorsed ‘This belongs to the Essay of the unpublished part of Usefulness’ Hand: G	English	<i>Works</i> , vol. 13, pp. 353–4 See also BP 10, fols. 27–8; BP 24, pp. 375–85; BP 28, pp. 293–5; and BP 29, fols. 207–18
BP 9, fols. 164–5	Unpublished Latin translation of part of <i>Exp. &amp; Obs. Physicae</i>	Late 17th century	Ch. 1, opening paragraph. Endorsed ‘21 pages’ Numbered internally ‘1’ and ‘2’ Hand: uncertain	Latin	<i>Works</i> , vol. 11, pp. 377–8 Continued in BP 8, fols. 180–3
BP 9, fols. 166–70	‘Relationes Physicae continued’ [Workdiary 32]	Late 1670s	(Pencil title). Reports on phenomena from travellers and virtuosi Hand: ?Slare Fol. 171 blank	English	Workdiary 32 The following entry was used in a book by Boyle: 32–1 (fol. 166), <i>Languid Motion</i> , <i>Works</i> , vol. 10, p. 285.
BP 9, fol. 172	MS version of part of <i>Mechanical Qualities</i>	1670s	‘Of the Imperfection of the Chemist’s Doctrine of Qualities’, chapter IX, paragraph 1, as published. Hand: Slare?	English	<i>Works</i> , vol. 8, p. 402
BP 9, fols. 173–4	Fragment of the MS of Henry Oldenburg’s published Latin translation (1676) of ‘New Experiments about the Preservation of Bodies in Vacuo Boyleano’ ( <i>Hidden Qualities</i> )	1674–1676	Complete except for opening paragraph; ends mid-sentence on fol. 174v with start of second paragraph of experiment XIV Hand: Oldenburg	Latin	<i>Works</i> , vol. 8, pp. 223–32



Ref.	Title	Date	Description	Language	Related material
BP 9, fols. 175–7	Fragment of Henry Oldenburg’s published Latin translation (1676) of ‘Causes of Attraction by Suction’ ( <i>Hidden Qualities</i> )	1674–1676	Starts partway through eleventh paragraph from the end and runs to the end Hand: Oldenburg	Latin	<i>Works</i> , vol. 8, pp. 199–222
BP 9, fols. 178–80	Unpublished Latin translation of part of <i>Medicina Hydrostatica</i>	c. 1690	Translation of ‘The Way of Weighing Sinking Bodies in Water’, in chapter II, missing final paragraph but including first paragraph in chapter III. Paragraphs numbered slightly differently in published English edition: ‘6’ published as second paragraph of ‘5’ and ‘7’ published as ‘6’ Hand: M	Latin	<i>Works</i> , vol. 11, pp. 211–16
BP 9, fols. 181–2	Unpublished Latin translation of part of <i>Exp. &amp;c Obs. Physicae</i>	c. 1690	Translation of chapter III up to and including Observation XIV Hand: M	Latin	<i>Works</i> , vol. 11, pp. 391–4
BP 9, fol. 183	Latin translation of experiment on the lodestone, related to ch. 1 of <i>Exp. &amp;c Obs. Physicae</i>	c. 1690	Hand: M	Latin	Published in <i>Works</i> , vol. 11, pp. lxxiii–lxxiv
BP 9, fols. 184–90	Unpublished Latin translation of most of preface to <i>Reason and Religion</i>	1680s	Hand: M	Latin	<i>Works</i> , vol. 8, pp. 236–42
BP 9, fols. 191–204	MS version of ‘Essay of the Porousness of Solid Bodies’, <i>Porosity</i> , chapter VIII	1670s	Lacks paragraph about fire on pp. 134–5 (see BP 19, fol. 195), opening part of 3rd paragraph from the end (see <i>ibid.</i> ), and final paragraph. Three paragraphs on fol. 195–6 and nine lines on fol. 198, both about the porousness of glass, were not published	English	<i>Works</i> , vol. 10, pp. 144–54, including previously unpublished material See also BP 19, fol. 195

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Hand: Slare Description</i>	<i>Language</i>	<i>Related material</i>
BP 9, fols. 206–10	MS version of parts of <i>Things above Reason</i>	1670s or later	Fol. 205 forms part of ‘Fifth Advice’, following on from BP 9, fol. 222. Fols. 206–10 comprise first seven paragraphs in ‘Fourth Advice’, with ‘Sophronius’ replacing ‘Arnobius’ and ‘Eugenius’ replacing ‘Pyrocles’ as interlocutors. Misbound: fol. 206 follows fol. 210 without a break Hand: Warr	English	<i>Works</i> , vol. 9, pp. 406–9, 420–1
BP 9, fols. 211–18	Fragment of ‘Dialogues concerning Heat and Flame’	Late 1650s	Hands: 1650s, ?	English	Published in <i>Works</i> , vol. 13, pp. 261–5. See also <i>ibid</i> , pp. xliv–xlvi
BP 9, fols. 219–22	MS version of part of <i>Things above Reason</i>	1670s or later	MS version of ‘Fifth Advice’, first and last parts (middle omitted), with ‘Sophronius’ replacing ‘Arnobius’ as an interlocutor. Fol. 205 follows fol. 222 without a break. Text on BP 26, fol. 201, follows text on middle of fol. 221, where the break occurs Hand: Warr	English	<i>Works</i> , vol. 9, pp. 413–16, 418–20. See also BP 26, fol. 201
BP 9, fols. 223–52	Letter in Italian from Lorenzo Magalotti to Boyle	[1672]	In five 6–leaf quires; a sixth is apparently missing. A further version survives in the Archivio di Stato, Florence, which includes the section missing here Hand: unknown	Italian	Published in <i>Correspondence</i> , vol. 4, pp. 262–314

Ref.	Title	Date	Description	Language	Related material
BP 10, fol. 1	Material relating to ‘Superficial Figures of Fluids’ ( <i>Phil. Trans.</i> , 1676)	? 1670s	Two unpublished paragraphs on surfaces of contiguous liquors: oil of turpentine and spirit of wine; probably a discarded version of part of this essay Hand: Slare	English	Overlapping with text from BP 27, pp. 253–73 Published in <i>Works</i> , vol. 8, pp. xlii–xlvi
BP 10, fols. 2–3	Latin mathematical extract, evidently from Wallis	Late 17th century	Hand: uncertain	Latin	Cf. BP 8, fols. 188–9, and BP 10, fols. 65–6
BP 10, fol. 4	‘Materials for the Inquiring what the Soul of a Brute may be’ (pencil)	Late 17th century	Requirements of air and heat for warm-blooded animals Hand: uncertain	English	See also BP 10, fol. 25
BP 10, fol. 5	Heads for experiments with volatile salts	1670s	Hand: Slare	English	Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 1–2
BP 10, fol. 6	‘Memoirs for the Paralipomena’	1670s–1680s	Notes on attraction of surfaces and particles Hand: B, with title by Bacon	English	Published on pp. 201–3, above
BP 10, fol. 7	Fragment of original version of <i>Usefulness</i>	1660s	(recto:) Text on undiscovered uses of experiments, related to but not identical with passages in section V of Essay X, including opening paragraph. Endorsed ‘belongs to Essay XII’. (verso:) Addendum about method of casting iron with copper, published in section V of Essay X; and unpublished passage about use of urine to produce perfume of musk, different from passage in previous essay Hands: rounded 1650s, F (bottom of verso)	English	<i>Works</i> , vol. 6, pp. 534, 537 (recto) <i>Works</i> , vol. 6, pp. 523–4, 535 (verso) Previously unpublished passage in <i>Works</i> , vol. 13, pp. 305–7

Ref.	Title	Date	Description	Language	Related material
BP 10, fols. 8–9	MS version of part of <i>Things above Reason</i>	1670s–1680s	MS version of two paragraphs in ‘Discourse’, showing how names of interlocuters were changed twice; also an unpublished passage Hand: Warr	English	<i>Works</i> , vol. 9, p. 374, including the previously unpublished passage
BP 10, fol. 10	Fragment of ‘Dialogue on the Transmutation and Melioration of Metals’	c. 1680	Hand: Emes	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 260–1
BP 10, fol. 11	MS version of part of <i>Christ. Virt., II</i>	1680s	Proposition I, introduction, slight changes before printing. Copied with slight changes in BP 1, fols. 52–3 Hand: Greg	English	<i>Works</i> , vol. 12, pp. 432–3
BP 10, fol. 12	Fragment from MS version of ‘Animadversions upon Mr. Hobbes’ Problemata de Vacuo’ ( <i>Hidden Qualities</i> )	1670s–1680s	Hand: uncertain	English	<i>Works</i> , vol. 8, pp. 192–3
BP 10, fol. 13	Material relating to <i>Effluvioms</i>	Early 1670s	Unpublished paragraph about ‘a body that has once been imbued with pestiferous particles’, probably intended for ‘Strange Subtilty of Effluvioms’ Hand: Slare	English	See <i>Works</i> , vol. 7
BP 10, fol. 14	Material relating to <i>Spring, 1st Continuation</i>	1660s	Unpublished comments about how to make the cement used in experiments with air-pumps, overlapping with final paragraph in ‘Some Advertisements touching the Engine Itself’ Hand: E	English	<i>Works</i> , vol. 6, p. 38



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 10, fol. 15	Material relating to ‘Respiration’ c. 1663 ( <i>Phil. Trans.</i> , 1670)		Unpublished experiment on a viper in an evacuated receiver, similar to those in title II and probably intended for publication there. Evidently one of the accounts of related experiments that Boyle states in published text had been lost Hand: D	English	Published in <i>Works</i> , vol. 6, p. xxxvii
BP 10, fol. 16	Fragment from MS version of ‘Animadversions upon Mr. Hobbes’ Problemata de Vacuo ( <i>Hidden Qualities</i> )	1670s– 1680s	Passage in the middle of fol. 16r not published in original edition Hand: uncertain	English	<i>Works</i> , vol. 8, pp. 175–7, including formerly unpublished passage
BP 10, fols. 17–18	Fragment of original version of <i>Usefulness</i>	Early 1660s	Perhaps the peroration of original version of the work, paginated 167–8 Hand: D	English	Published in <i>Works</i> , vol. 13, pp. 310–11
BP 10, fols. 19–20	Section of text from ‘The Requisites of a Good Hypothesis’	c. 1680	Hand: Emes	English	Published in <i>Works</i> , vol. 13, pp. 271–2
BP 10, fol. 21	[Workdiary 30, part 1]	Early 1670s	Hand: Slare	English	Workdiary 30, part 1 See also BP 26, fols. 137–8
BP 10, fol. 22	Series of passages concerning physical phenomena and theological reflections	1670s– 1680s	Hand: Bacon	English	
BP 10, fol. 23	Experiments on gold	1670s	Hand: ?Slare	English	
BP 10, fol. 24	Fragment of an unpublished part of <i>Usefulness</i>	1660s	Paragraph on expectations of natural philosophy Hand: G	English	Published in <i>Works</i> , vol. 13, p. 346

Ref.	Title	Date	Description	Language	Related material
BP 10, fol. 24X	List of particulars of precious stones	1670s	Hand: Slare	English	
BP 10, fol. 25	‘Materials for the Inquiring what the Soul of a Brute may be’ (pencil)	1670s–1680s	Requirements of air and heat for warm-blooded animals. Copy of BP 10, fol. 4. Hand: Bacon	English	
BP 10, fol. 26	Material relating to appendix to <i>Final Causes</i>	? late 1680s	Note about the bodies of animals as proving divine design; probably for intended Appendix Hand: Bacon, corr. by Boyle	English	Published in <i>Works</i> , vol. 14, pp. 169–70
BP 10, fol. 26X	Note to ‘Cogitationes Physicae’	1670s–1680s	Emended copy of BP 10, fol. 99 Hand: Bacon, corr. by Boyle	English	
BP 10, fols. 27–8	Part of introduction to unpublished ‘Essay XIII’ of <i>Usefulness</i>	1660s	Continued from BP 28, pp. 293–6. There is a little flap sticking up with the words ‘Mutuall Usefulness’ on it Hand: E, corr. by Boyle?	English	Published in <i>Works</i> , vol. 13, pp. 350–2 See also BP 9, fols. 162–3; BP 24, pp. 375–85; BP 28, pp. 293–5; BP 29, fols. 207–18
BP 10, fols. 29–31	Section of text on sensation and sensible qualities	1660s	Hand: E	English	Published in P. Anstey, <i>The Philosophy of Robert Boyle</i> (London and New York, 2000), pp. 209–10
BP 10, fol. 32	Unpublished paragraph concerning a MS ‘about those rich and noble Gems, that grow in countrys very remote from ours’, written after ‘the foregoing Pentades’ and obtained from ‘the worthy	c. 1690	Related to chapter II of <i>Exp. &amp; Obs. Physicae</i> Hand: Bacon, corr. by Boyle	English	<i>Works</i> , vol. 11

Ref.	Title	Date	Description	Language	Related material
Deputy Governor of the East India Company Mr T[avernier]'					
BP 10, fols. 33–4	Fragment of unpublished Latin translation of 'Respiration' ( <i>Phil. Trans.</i> , 1670)	1680s	Containing only final two and a half paragraphs of title XX Hand: Ramsay	Latin	<i>Works</i> , vol. 6, pp. 256–7
BP 10, fol. 35	Fragment of text of 'Of Subterranean Steames As they are capable of affecting the Aire'	1660s	Hand: E	English	Published in <i>Works</i> , vol. 13, p. 405 See also BP 18, fols. 122–4 and BP 21, pp. 87–153
BP 10, fol. 36	Passage on nature of propositions	1680s	Hand: Greg	English	
BP 10, fol. 37	'Tituli Ad Naturalem Atque Experimentalem Aeris Historiam', Latin titles for <i>General History of Air</i>	1680s	Hand: Greg	Latin	Published in <i>Works</i> , vol. 12, pp. xxiii–xxiv See also BP 26, fol. 45v
BP 10, fols. 38–40	Text concerning Boyle's views on occasionalism	c. 1680	Hand: A	English	Published in P. Anstey, 'Robert Boyle on Occasionalism: An Unexamined Source', <i>Journal of the History of Ideas</i> , 60 (1999), 57–81, on pp. 59–62, and in P. Anstey, <i>The Philosophy of Robert Boyle</i> (London and New York, 2000), pp. 210–12
BP 10, fol. 41	Memoranda concerning various natural phenomena and philosophical and theological topics	various c. 1680	Hand: C	English	

Ref.	Title	Date	Description	Language	Related material
BP 10, fols. 42–6	MS version of parts of section I 1670s of <i>Final Causes</i>		Paragraphs reordered before printing but only minor changes in wording: (i) first paragraph added in margin of fol. 42r/v (ii) part of second paragraph on top of fol. 43 (iii) end of ninth paragraph on fol. 43 (iv) first half of tenth paragraph on fol. 42 (v) twelfth paragraph and first half of thirteenth paragraph on fols. 43–5 (vi) most of final paragraph on fols. 45–6 Hand: Warr	English	<i>Works</i> , vol. 11, pp. 85–9 (with gaps), 94–5
BP 10, fols. 47–8	Notes on Sennert, etc., on the senses, with list of miscellaneous phenomena relating to sensation on fol. 48v	Late 17th century	Title on fol. 48r, ‘Scheme of the Notes about Sensation in generall’ (pencil). Hand: uncertain	English	See also BP 41, fol. 51
BP 10, fol. 49	Series of questions on metals and ores	1660s	Hand: K	English	
BP 10, fols. 50–1	Mathematical equations and notes	Late 17th century	Hand: uncertain	English	
BP 10, fols. 52–5	Unpublished experiment, showing the sympathetic vibration of guitar strings	1650s or early 1660s	Similar in content to <i>Languid Motion</i> , chapter VII, paragraph 2; perhaps this is the discussion cited there obliquely Hand: 1650s	English	See <i>Works</i> , vol. 10, p. 280
BP 10, fol. 56	Extract from Agostino Scilla, <i>La Vana Speculazione Disingannata dal Senso</i> (Naples, 1670)	1680s	Hand: Greg	Italian	Agostino Scilla, <i>La Vana Speculazione Disingannata dal Senso</i> (Naples, 1670)
BP 10, fol. 57	List of magnetical experiments	? 1660s	Hand: ?G	English	Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 2–3



Ref.	Title	Date	Description	Language	Related material
BP 10, fol. 58	Notes on rigidity and elasticity	1660s–1670s	Hand: N	English	
BP 10, fol. 59	MS version of part of <i>Christ. Virt., II</i> and another section of text	1680s	In two columns: (i) Passage comparing mechanical philosophy to scholasticism, apparently intended for another work (ii) Continued on fol. 59v. MS version of subsection 4 (‘Applicatory Reflections’), paragraph 10, several changes in wording; no further changes before publication Hand: C	English	<i>Works</i> , vol. 12, pp. 486–7
BP 10, fol. 60–1	(1) MS version of part of <i>Christ. Virt., I, Appendix</i> and (2) passages concerning admiration and understanding of God and his works; and other topics	1680s	(1) Conference III, argument IV, paragraph 7, English complete, showing several revisions. Additional paragraphs on fols. 60v and 61 not published; unclear whether they were intended for this work Hand: Smith, corr. by Boyle	English	(1) <i>Works</i> , vol. 12, p. 396
BP 10, fol. 62	Fragment of ‘Dialogues concerning Heat and Flame’	Late 1650s	Hand: 1650s	English	Published in <i>Works</i> , vol. 13, pp. 265–8
BP 10, fols. 63–4	Fragment of the original version of <i>Usefulness</i>	1650s or early 1660s	MS version of section of text on experiments with aqua fortis, partly published in section V of Essay X, partly unpublished (in order 64, 63) Hand: rounded 1650s	English	<i>Works</i> , vol. 6, pp. 533–4 Previously unpublished section in vol. 13, pp. 307–10
BP 10, fols. 65–6	Extract from Wallis’ <i>Opera Mathematica</i>	Late 17th century	Hand: uncertain	Latin	J. Wallis, <i>Opera Mathematica</i> (1693–9) See also BP 8, fols. 188–9 (and BP 10, fols. 2–3)

Ref.	Title	Date	Description	Language	Related material
BP 10, fols. 67–8	MS version of part of <i>Effluviūms</i>	Early 1670s	‘Strange Subtilty of Effluviūms’, chapter II, paragraphs 1–3 and 5 Hand: Slare	English	<i>Works</i> , vol. 7, pp. 234–6
BP 10, fols. 69–70	Experiments concerning ‘klandier’ worm (imperfect).	Late 17th century	Head: unknown (? holograph)	English	
BP 10, fol. 71	Notes on the nature of our suppositions	1670s	Hand: Slare	English	
BP 10, fol. 72	Phenomena to be remembered.	1670s–1680s	Hand: Bacon	English	
BP 10, fol. 73	Latin translation of part of experimental treatise	1660s–1670s	Hand: N	Latin	
BP 10, fol. 74	List of new experiments to be done <i>in vacuo</i>	1670s	Hand: Slare	English	
BP 10, fol. 75	Draft of part of chemical treatise	1670s–1680s	Hand: Bacon	English	
BP 10, fols. 76–7	List of phenomena to illustrate points in a treatise	1660s	Hand: F, with addns by E	English	
BP 10, fol. 77X	Notes on measurement of weights	Late 17th century	Hand: ?Boyle	English	
BP 10, fol. 78	Unpublished observations on underwater plants	1660s	Probably intended for inclusion in ‘Relations about the Bottom of the Sea’; ( <i>Saltiness of the Sea</i> ) Hand: ?G	English	See <i>Works</i> , vol. 7

Ref.	Title	Date	Description	Language	Related material
BP 10, fol. 79	Material relating to <i>Usefulness</i> , II, sect. 2	1660s	List of topics from ‘Essay X’ (altered from ‘XII’): ‘Things treated of in the X Essay which shews’ Hand: G	English	Discussed in <i>Works</i> , vol. 13, p. liii
BP 10, fols. 80v–1	Notes on mixture and its implication for explanation of qualities	?1660s	Hand: ?H	English	
BP 10, fols. 82–5	‘Notes on the Essay concerning Saltpeter’.	1650s or early 1660s	MS version of the final section of the preface to ‘Some Specimens of an Attempt to make Chymical Experiments Useful to Illustrate the Notions of the Corpuscular Philosophy’ in <i>Certain Physiological Essays</i> , with material later discarded. Endorsed by Boyle on fol. 85v: ‘Præface to my Promiscuous Exp[eriments]’ Hand: two 1650s hands	English	<i>Works</i> , vol. 2, pp. 90–1 Previously unpublished section published in <i>ibid.</i> , pp. xvii–xviii
BP 10, fol. 86	Notes on traction	Late 17th century	Hand uncertain	English	
BP 10, fols. 87–8	‘Heads of the Discourse of the Pores of Bodys & figures of Corpuscles’	1660s	Evidently relating to <i>Porosity</i> Hand: F	English	See <i>Works</i> , vol. 10
BP 10, fol. 89v	MS version of the 21 titles for <i>Cold</i>	? Early 1660s	As printed in list of contents Hand: uncertain	English	<i>Works</i> , vol. 4, pp. 226–7 See also BP 36, fol. 94
BP 10, fols. 90–2	Title and introductory section from unpublished ‘Essay the XI’ of <i>Usefulness</i> etc.	1660s	About reasons to hope for great things from natural philosophy. Brief notes follow on fol. 92 Hands: G, Greg	English	<i>Usefulness</i> material published in <i>Works</i> , vol. 13, pp. 348–9

Ref.	Title	Date	Description	Language	Related material
BP 10, fol. 93	MS version of part of <i>Usefulness, II, sect. 2</i>	1650s	Parts of two paragraphs in section 7 of Essay I Hand: rounded 1650s	English	<i>Works</i> , vol. 6, pp. 434–5
BP 10, fol. 94	Contents of the (as yet) unpublished parts of <i>Usefulness</i>	c. 1666	Continuation of text beginning on BP 38, fol. 20c: list of titles (numbered 6–14) to be treated Hand: E	English	Published in <i>Works</i> , vol. 13, pp. lxi–lxx. See also Joseph Glanvill, <i>Plus Ultra</i> (London, 1668), pp. 104–6 See also BP 8, fol. 1; BP 38, fol. 20c
BP 10, fol. 95	Superseded version of part of <i>Medicina Hydrostatica</i>	? 1680s	Chapter XVI, paragraphs 6–7, reordered and greatly extended before publication Hand: Bacon, corr. by Boyle	English	<i>Works</i> , vol. 11, p. 250
BP 10, fol. 96	Introductory note to book	1680s	Hand: Greg	English	
BP 10, fol. 97	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	1673 or later	Chapter II, observation X, first 2 paragraphs, virtually as published Hand: Smith	English	<i>Works</i> , vol. 11, p. 389
BP 10, fol. 98	MS version of complaint about plagiarism by foreign writers, esp. in Germany and Italy	1670s–1680s	Fair copy in BP 36, fol. 15 Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 362–3
BP 10, fol. 99	Note to ‘Cogitationes Physicae’	1670s–1680s	Cf. BP 10, fol. 26X Hand: Smith	English	
BP 10, fol. 100	Light: reconcileability of Epicurean and Cartesian theories	1680s	Hand: Greg	English	
BP 10, fol. 101	MS version of Advertisement to ‘Strange Reports’ in <i>Exp. &amp; Obs. Physicae</i>	1680s	First paragraph only Hand: Greg	English	<i>Works</i> , vol. 11, p. 429 Copy of MS 189, fol. 118



Ref.	Title	Date	Description	Language	Related material
BP 10, fol. 102	Phenomena to remember, and references	1670s–1680s	Hand: Slare, with adds. by ?A	English	
BP 10, fols. 103–6	MS version of part of <i>Notion of Nature</i>	1660s	Section V, arguments 1–3. Same as BP 8, fols. 149–52, but this is the earlier copy. Neither copy identical to printed text Hand: F, addns by E	English	<i>Works</i> , vol. 10, pp. 483–7
BP 10, fol. 107	‘That Divers Occult Qualities may be Mechanically Produced’, unpublished introductory paragraph, perhaps from an essay once intended for inclusion in <i>Mechanical Qualities</i>	Late 17th century	Hand: uncertain	English	See <i>Works</i> , vol. 8
BP 10, fols. 108–9	‘Avertissement de Mr. Boyle sur la perte qu’il a faite de plusieurs de ses Ecrits...’	c. 1689	French translation of <i>Advertisement</i> Hand: unknown French hand	French	<i>Works</i> , vol. 11, pp. 169–71
BP 10, fols. 110–11	Notes on phenomena associated with baroscope and their implications	1680s	Hand: Greg	English	
BP 10, fol. 112	List of experiments and phenomena to discuss in an unspecified treatise, some of which are included in <i>Effluviis</i>	1660s	Hand: J	English	See <i>Works</i> , vol. 7
BP 10, fols. 113–14	List of titles of various works by Boyle, with numbered references to them	Late 1660s	Hand: uncertain	English	See above, pp. 163–4, 183

Ref.	Title	Date	Description	Language	Related material
BP 10, fol. 115	Sentence concerning production of bodies	1660s	Hand: E	English	
BP 10, fol. 116	Robert Hooke's comments on an MS version of <i>Final Causes</i>	Late 1670s or early 1680s	Hand: Hooke	English	Published in E. B. Davis, 'Parcere Nominibus', in M. Hunter (ed.), <i>Robert Boyle Reconsidered</i> (1994), pp. 157–75, on pp. 170–1
BP 10, fol. 117	Text concerning saltiness of sea	1680s	Hand: Greg	English	
BP 10, fol. 118	List of 'Experiments to be made in seald Receivers'	1660s	Various experiments published by Boyle, including ones in 'Relation between Light and Air' ( <i>Phil. Trans.</i> , 1668) ('Sealing up of rotten wood that shines' and 'The sealing of faintly shining fish'); 'Respiration' ( <i>Phil. Trans.</i> , 1670) ('The Sealing up of Insects'); 'Of the Difficulty of Producing Flame without Air', experiment I, and 'Of the Difficulty of Preserving Flame without Air', experiment I ( <i>Flame and Air</i> ) ('Seal up a little Brimstone & try to burne it') Hand: E	English	See <i>Works</i> , vol. 6, pp. 11–13, 251–4; <i>Works</i> , vol. 7, pp. 87, 97. Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 3–4
BP 10, fols. 119–20	Part of tract about flame	1670s	Fragment of text of which a Latin translation survives as BP 31, pp. 277–94 Hand: Slare	English	Published in <i>Works</i> , vol. 14, pp. 57–9 See also BP 31, pp. 277–94
BP 10, fols. 121–2	MS version of part of <i>Usefulness, II, sect. 1</i>	1650s or early 1660s	Two and a half paragraphs in Essay I, as printed, followed by text on BP 17, fols. 108–11. Interspersed with text on BP 8, fols. 3–28. Hand: rounded 1650s	English	<i>Works</i> , vol. 3, pp. 302–3

Ref.	Title	Date	Description	Language	Related material
BP 10, fols. 123–6	Latin treatise attacking van Helmont in favour of Paracelsus	Late 17th century	Part of same treatise as BP 8, fols. 196–203 Hand: uncertain	Latin	
BP 10, fol. 127	Topics concerning mutual benefit of experimental and speculative philosophy, etc.	c. 1680	Hand: A	English	Substantially the same as BP 9, fol. 30v
BP 10, fol. 127X	Passages concerning types of experience	1670s–1680s	Hand: Bacon	English	
BP 10, fol. 128	Material relating to <i>Usefulness</i>	1660s	Endorsed ‘Essay 4’. Hand: G	English	Published in <i>Works</i> , vol. 13, pp. 346–7
BP 10, fol. 129	Experiment concerning effect of salt and snow on oil in pipe	1660s	Hand: E	English	
BP 10, fol. 130	Damaged note on experiment by ‘Dr Faustus’	1660s	Hand: F	English	
BP 10, fol. 130X	Record of results of experiment	c. 1680	Hand: C	English	
BP 10, fol. 131	Problems of reusing others’ experiments	1660s	Hand: D	English	
BP 10, fol. 132	Heads concerning elasticity	1660s	Hand: F	English	Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 4–6
BP 10, fols. 133–4	‘The History of Tast[e]s as they belong to the Object that is said to be endowd therewith’	1660s	List of headings endorsed ‘The 1st Draught’; apparently the ‘speculations’ that Boyle disavows at the start of the published text of ‘Tastes’ in <i>Mechanical Qualities</i> Hand: F	English	See <i>Works</i> , vol. 8, p. 365. Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 6–7

Ref.	Title	Date	Description	Language	Related material
BP 10, fols. 135v–6	‘Of the History of Odors as they belong to the Object that is said to be endowd therewith’	1660s	List of headings endorsed ‘A Rough Draught’; similar to BP 10, fols. 133v–4 Hand: F	English	See <i>Mechanical Qualities</i> , vol. 8. Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 7–9
BP 10, fol. 137	Part of discourse addressed to Pyrophilus on artificial bodies	1660s	Hand: J	English	
BP 10, fol. 138	Note explaining lack of order in ensuing experiments	Late 17th century	Hand: uncertain	English	Published on p. 184, above
BP 10, fol. 139	Experiment with plants growing without air.	1670s–1680s	Hand: Bacon	English	
BP 10, fols. 140–1	Introduction to ‘Essay the VII’ of <i>Usefulness</i>	1660s	Hand: G	English	Published in <i>Works</i> , vol. 13, pp. 343–4
BP 10, fols. 142–3	Material relating to <i>Mechanical Qualities</i>	1680s or later	Text giving the ‘second’ and ‘third’ things ‘requisite of the inflammability of a body’, apparently intended for unpublished <i>Mechanical Origin of Flame</i> Hands: C, Greg	English	See <i>Works</i> , vol. 8
BP 10, fol. 144	Note on luminosity of bodies	1670s–1680s	Hand: Smith	English	
BP 10, fol. 145	Experiment on texture of camphire [i.e. camphor]	1680s	Hand: Greg	English	
BP 10, fol. 146	Notes on eyes and teeth of fish/crabs	Late 17th century	Hand: unknown	English	
BP 10, fol. 147	MS version of part of <i>Mineral Waters</i>	c. 1680	Section I, paragraph 8, first part; second part of paragraph added later Hand: C	English	<i>Works</i> , vol. 10, pp. 218–19



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 10, fol.148	‘Problemata Usus Septimae Tabulae’	1670s–1680s	Hand: Bacon	Latin	
BP 10, fol. 149	Suppositions: why men overlook them	1670s	Hand: Slare	English	
BP 10, fol. 150	Material relating to <i>Christ. Virt., I, Appendix</i>	? 1680s	Unpublished paragraph on right reason, endorsed for ‘The III Conf.’ Copied out in BP 1, fol. 83a Hand: Bacon	English	See <i>Works</i> , vol. 12
BP 10, fols. 151–2	Experiments with oily liquors, etc.	1670s–1680s	Hand: Bacon	English	
BP 10, fols. 153–4	Material relating to <i>Spring of the Air</i>	1650s or early 1660s	Description of experiments with a weatherglass by ‘Mr Ball, written for ‘my Lord’ (fol. 154). Refers to ‘these notes upon the 18th experiment’, probably related to discussion of rising and falling mercury in experiment XVIII. Cf. <i>Defence, Works</i> , vol. 3, pp. 51–2, where ‘Mr J. Ball’ is credited with similar experiments Hand: 1650s	English	Published in <i>Works</i> , vol. 1, pp. cxxxiii–cxxxiv. Related to ibid., pp. 201–2
BP 10, fols. 155–6	MS version of experiment III of ‘New Experiments about Explosions’ ( <i>Flame and Air</i> )	Early 1670s	First paragraph rewritten as paragraph 2 in published experiment; second paragraph published as first part of paragraph 3, with an interesting revision. Ends mid-sentence on fol. 156 Hand: Slare	English	<i>Works</i> , vol. 7, pp. 135–7, including previously unpublished material

Ref.	Title	Date	Description	Language	Related material
BP 10, fols. 157–8	MS version of parts of <i>Cold</i>	Early 1660s	Two passages about ice assuming the shapes of plants, if the water is first impregnated with ‘the Saline parts of Plants’. Final paragraph not published. Cites <i>Certain Physiological Essays</i> as already published, so MS cannot pre-date 1661 Hand: 1650s	English	<i>Works</i> , vol. 4, pp. 447–8, 450–1, including previously unpublished passage
BP 10, fols. 159–60	MS version of part of <i>Degradation of Gold</i>	1677–1678	Paragraphs 13–15, starting with middle of second sentence in paragraph 13 (the rest on another sheet, now lost); minor changes in wording before publication Hand: C	English	<i>Works</i> , vol. 9, 12–14. See also L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 282–5
BP 10, fol. 161	MS version of part of <i>Final Causes</i>	1680s	Section IV, proposition III, paragraph 17 and start of 18, identical with published text. Ends mid-sentence, but merges with text on MS 199, fol. 132, where paragraph 18 starts afresh Hand: Greg	English	<i>Works</i> , vol. 11, pp. 135–6
BP 10, fol. 162	MS version of parts of <i>Icy Noctiluca</i>	c. 1680	Section XI, observations I–II, as published; followed by unpublished observations in different hand, about the colours produced by a ‘noctilucal Substance’ subjected to various trials Hands: Warr, A	English	<i>Works</i> , vol. 9, p. 330; previously unpublished material published in ibid, pp. xxvii–xxviii
BP 10, fol. 163	MS version of part of <i>Usefulness, II, sect. 2</i>	1660s	Final paragraph (point 7) in essay on ‘Usefulness of Mathematics’, some later additions Hand: E	English	<i>Works</i> , vol. 6, pp. 450–51

Ref.	Title	Date	Description	Language	Related material
BP 10, fol. 164	Fragment of ‘Essay on Spontaneous Generation’	Late 1650s	Hand: 1650s, ?	English	Published in <i>Works</i> , vol. 13, pp. 281–2
BP 10, fol. 165	Part of dialogue concerning planetary intelligences and divine beings in heaven	1680s	Hand: Greg	English	
BP 10, fol. 166	False suppositions, and phenomena which more significant than realised (headings)	1680s	Hand: Greg	English	
BP 10, fol. 167	Material relating to appendix to <i>Final Causes</i>	c. 1680 or later	Two paragraphs about how God’s purposes are illustrated by the creation of eyes before birth in chick embryos. May be discarded from section II, esp. vicinity of eleventh paragraph. Partly copied out in BP 17, fol. 46a. Endorsed: ‘Tbd’. Headed ‘A2’ Hand: C	English	Published in <i>Works</i> , vol. 14, p. 170; the second paragraph also in MacIntosh, 2.2.33
BP 10, fol. 168	Preliminary note to treatise	1680s	Hand: Greg	English	
BP 10, fol. 169	MS material relating to <i>General History of Air</i>	1680s	Hand: Greg	English	List of headings as in <i>Works</i> , vol. 12, p. xiiin., with introductory text

Volume 11  
Quarto-size volume; foliated; 334 folios. 19th-century contents leaf: Theology.

Ref.	Title	Date	Description	Language	Related material
BP 11, fols. 1–23	Unpublished Latin trans. of ‘Possibility of Resurrection’ ( <i>Reason and Religion</i> )	1670s–1680s	Complete; copied in BP 11, fols. 24–40 Hand: L	Latin	<i>Works</i> , vol. 8, pp. 295–313

Ref.	Title	Date	Description	Language	Related material
BP 11, fols. 24–40	Clean copy of Latin translation of ‘Possibility of Resurrection’ ( <i>Reason and Religion</i> )	1670s	Copy of text in BP 11, fols. 1–23 Hand: N	Latin	<i>Works</i> , vol. 8, pp. 295–313
BP 11, fols. 41–50	Unpublished Latin translation of the introductory material to <i>Excellency of Theology</i>	1670s–1680s	(i) title; (ii) ‘Editoris ad lectorem Monitum’; (iii) ‘Prologus Autoris’; (iv) introduction Continued in BP 14, fols. 178–309 Hand: L	Latin	<i>Works</i> , vol. 8, pp. 3–12
BP 11, fols. 51–110	Unpublished Latin translation of <i>Seraphic Love</i>	Post 1663	Complete, including the ‘Occasional Reflection’ Hand: L	Latin	<i>Works</i> , vol. 1, pp. 51–139
BP 11, fols. 111–37	Unpublished Latin translation of ‘Greatness of Mind’ ( <i>Christ. Virt., I</i> )	1680s	Hand: L	Latin	<i>Works</i> , vol. 11, pp. 345–66
BP 11, fols. 138–72	Unpublished Latin translation of Essay II of <i>Usefulness, I</i>	Late 17th century	Complete Hand: uncertain	Latin	<i>Works</i> , vol. 3, pp. 213–34
BP 11, fols. 173–221	French translation of <i>Reason and Religion</i>	Late 17th century	Complete; fols. 201–21 precede fols. 173–200 Hand: unknown	French	<i>Works</i> , vol. 8, pp. 233–94
BP 11, fols. 222–48	French translation of ‘Possibility of Resurrection’ ( <i>Reason and Religion</i> )	Late 17th century	Complete Hand: unknown	French	<i>Works</i> , vol. 8, pp. 295–313
BP 11, fols. 249–76	‘Excerpta’ from Lawrence Eachard’s <i>Ecclesiastical History</i> (3rd edn, 1712)	1717	Two paperbooks of notebook size, dated 10 December 1717 Hand: evidently that of the youthful Henry Miles	English	



Ref.	Title	Date	Description	Language	Related material
BP 11, fols. 277–8	Memorandum on the Christians of Fort St George and the East India Company’s intention to erect a Protestant church there, to translate the English liturgy into Portuguese, and to find missionaries	Late 17th century	Hand: Unknown	English	
BP 11, fols. 279–84	‘A breif History of the Mashepog Indians’, and their conversion on 11 May 1666	Late 17th century	Text with introduction by John Eliot; apparently unpublished Hand: unknown	English	
BP 11, fols. 285–92	‘Restaurationis Universalis Cynosura & Amussis’	Mid 17th century	Latin transcript of work by John Dury: cf. further copies in HP 17/19 (see G.H. Turnbull, <i>Hartlib, Dury and Comenius</i> (London, 1947), p. 314, no. 180) Scribal hand	Latin	
BP 11, fols. 293–5	Printed table giving elements of the oriental languages (fol. 293), and notes by Thomas Hyde	1670s–1680s	Hand: Hyde	Hebrew, Arabic, English	
BP 11, fols. 296–309	‘Ars coepta’: small paperbook giving numerical formulae, etc.	1681	Dated Amsterdam, Kal.Dec. [i.e. 1 December] MDCLXXXI Hand: Bacon	Latin	Evidently an alchemical text in cipher: see L.M. Principe, ‘Robert Boyle’s Alchemical Secrecy’, <i>Ambix</i> , 39 (1992), 63–74, on p.67
BP 11, fols. 310–19	Notes on oriental languages	18th century	A small notebook in marbled covers Hand: Miles	English	
BP 11, fols. 320–2	Excerpt from printed edition of New Testament in Greek by Robert Stephanus	? 16th century		Greek	

Ref.	Title	Date	Description	Language	Related material
BP 11, fols. 323–4	Specimen of Hebrew and Arabic by Thomas Hyde, with cover note by Miles	1670s–1680s	Cf. fol. 294, above, and BP 4, fol. 175 Hands: Hyde, Miles	Hebrew, Arabic	
BP 11, fols. 325–34	Hebrew printed text of parts of Old Testament	17th century		Hebrew	

Volume 12

Quarto-size volume in three separate sections, each with new pencil foliation; 219 folios.

Ref.	Title	Date	Description	Language	Related material
BP 12	‘Jesus Nazarene Legislator’, by Adam Boreel	c. 1660	Series of chapters arguing that prophecies and Latin miracles demonstrate Christ’s divinity. The foliation is early and is perhaps Boyle’s. (i) Fols. 2–100: title and contents leaf and text of work from start to chapter 9 (part 1) (ii) Fols. [10]1–[1]88: text of work from chapter 9 (part 2) to end (iii) Fols. 2–33: 206 numbered notes to chapter 12 Scribal hand		See R. Iliffe, “‘Jesus Nazarene legislator’: Adam Boreel’s Defence of Christianity,” in S. Berti et al. (eds.), <i>Heterodoxy, Spinozism and Free Thought in Early-eighteenth-century Europe</i> (Dordrecht, 1996), pp. 375–96

Volume 13

Quarto-size volume in five separately foliated sections; 111 folios.

Ref.	Title	Date	Description	Language	Related material
BP 13, fols. 1–111	Additional material to 'Jesus Nazarenus Legislator'	c. 1660	(i) 'Ordo Tractatus Legislator', fols. 1–5. Introductory essays. (ii) Numbered notes to text of 'J.N.L.', fols. 2–37. Dated 21 June 1660. (iii) Book II of 'J.N.L.': 'De probatione veritatis Librorum Novi Testamenti; et Tractatu, Jesus Nazarenus Legislator, per eos probando, Considerationes', fols. 1–11 (iv) Additional material: copy of 'Ordo Tractatus Jesus Nazarenus humani generis Universi Legislator' with notes, and notes to 'Argumenta', fols. 1–38 (v) Appendix, fols. 1–21 Scribal hand	Latin	See R. Iliffe, 'Jesus Nazarenus legislator': Adam Boreel's Defence of Christianity' in S.Berti et al. (eds.), <i>Heterodoxy, Spinozism and Free Thought in Early-eighteenth-century Europe</i> (Dordrecht, 1996), pp. 375–96

Volume 14

Quarto-size volume ; foliated; 310 folios. 19th-century contents leaf: Theology.

Ref.	Title	Date	Description	Language	Related material
BP 14, fols. 1–14	'Scripture Observations', 'Joseph his Mistressse' and 'Occasional Meditations'	March–May 1647	Much of this copied out in BP 7, fols. 128–33, English but not the 'Joseph' letter, the two reflections that were printed and a few other reflections. Various reflections are dated, all between March and May 1647. Fol. 14 blank Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 101–15 For the two reflections reused by Boyle see <i>Works</i> , vol. 5, pp. 85, 87 'Joseph his Mistressse' (fols. 2–4) is published in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), pp. 283–5

Ref.	Title	Date	Description	Language	Related material
BP 14, fols. 15–23	‘Essay I. of Time & Idleness’	1640s	Hand: early Boyle	English	Published in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), pp. 237–48
BP 14, fols. 24–6	‘Remoras of Truth’	1640s–1650s	Fols. 25–6 blank Hand: early Boyle	English	Published in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), p. xl.
BP 14, fols. 27–42	Discourse concerning the plague of 1665	? 1660s	Fol. 27 blank In Lady Ranelagh’s hand, and evidently written by her	English	See Ruth Connolly in <i>Notes &amp; Queries</i> , 251 (2006), 170–2
BP 14, fols. 43–6	Latin text concerning a projected Universal Society for reforming medicine, education, commerce and the mechanical arts by gathering and transmitting information from all over Europe and for setting up schools	17th century	Hand: unknown	Latin	Cf. BP 35, fols. 205–8
BP 14, fols. 47–74	Copy of Alexander von Suchten’s <i>Concordantia Chymica</i>	Late 17th century	Imperfect: breaks off at p. 125 of Suchten’s text Hand: unknown	Latin	Alexander von Suchten, <i>Concordantia Chymica</i> , in Franz Kieser’s <i>Cabala Chymica</i> (1606), pp. 63ff
BP 14, fols. 75–148	Unpublished Latin translation of <i>Reason and Religion</i>	1670s–1680s	Complete incl. publisher’s note and preface. Order should be fols. 76–81, 108–104 (backward), 103–82 (backwards), then 109–48 Hand: L	Latin	<i>Works</i> , vol. 8, pp. 233–94
BP 14, fols. 149–65	Treatise concerning the Quakers, attributed to George Fox on fol. 164	Late 17th century	Hand: unknown	English	



Ref.	Title	Date	Description	Language	Related material
BP 14, fols. 166–77	‘Theophrasti Paracelsi Bombast ab Hohenheim &c. Clavis seu Decimus Archidoxorum Liber e MS Codice Germanico Vetustissimo’	1660s–	Copy of the (spurious) Book 10 of Paracelsus’ <i>Archidoxa</i> ; cf. BP 39, fol. 75 Hand: N	Latin	
		1670s			
BP 14, fols. 178–309	Part of unpublished Latin translation <i>Excellency of Theology</i>	1670s–	Continuation of translation in BP 11, 41–50: the main text of the work, excluding ‘Excellency of Mechanical Hypothesis’. Fol. 178 is a cover sheet with endorsements by Wotton. Hand: L	Latin	<i>Works</i> , vol. 8, pp. 13–98
		1680s			
BP 14, fol. 310	‘Explication of the Notes’	1670s– 1680s	Key to abbreviations/symbols used in certain Boyle MSS. Hand: Bacon	English	

Volume 15

Quarto-size volume in various separately foliated sections, partially misbound; 240 leaves.

Ref.	Title	Date	Description	Language	Related material
BP 15, fols. 1–104	Material relevant to ‘Jesus Nazareus Legislator’	c. 1660	(i) Miscellaneous Notes, fols. 1–104 followed by a blank leaf (ii) ‘De Probatione Veritatis Librorum Novi Testamenti Considerationes’ and ‘Specimen Tractationis, secundum ordinem accuratum: quoad primum Caput, Tractatus, Legislator’; fols. 1–37, 40–58, 71–3, misbound in the order 23–6, 33–7, 28–32, 71–3, 1–22, 27, 40–58 (including blank)	Latin	See R. Iliffe, ‘“Jesus Nazareus legislator”: Adam Boreel’s Defence of Christianity’, in S. Berti et al. (eds.), <i>Heterodoxy, Spinozism and Free Thought in Early-eighteenth-century Europe</i> (Dordrecht, 1996), pp. 375–96

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
			(iii) further notes, references, etc., related to 'Jesus Nazarenus Legislator'; fols. 1–77 Hand: Scribal hand - same as BP 12 and 13		

Volume 16

Folio-size volume; foliated; 221 folios. 19th-century contents leaf: Philosophy.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 16, fols. 1–71	Unpublished Latin translations of parts of <i>Things above Reason</i>	1680s	'Advices', lacking ending, and 'Discourse', final 19 paragraphs, starting on fol. 59, following text in BP 16, fols. 108–53 Hand: Ramsay	Latin	<i>Works</i> , vol. 9, pp. 395–424, 387–93 See also BP 16, fols. 108–55
BP 16, fols. 72–85	'Humani Intellectus Imperfectio ? 1680s nativo suo lumine detecta', 'The Weakness of the Human Understanding Revealed in its Native Light'	? 1680s	Dialogue on the imperfection of the human intellect Hand: Ramsay	Latin	Published in <i>Works</i> , vol. 14, pp. 219–33
BP 16, fols. 86–107	Unpublished Latin translation of part of <i>Final Causes</i>	1680s	First two propositions in section IV Hand: Ramsay	Latin	<i>Works</i> , vol. 11, pp. 119–30 For the rest, see BP 24, fols. 419–555
BP 16, fols. 108–55	Unpublished Latin translation of parts of <i>Things above Reason</i>	1680s	'Discourse', ending mid-sentence on fol. 153 and continued in BP 16, fols. 59–71, followed by revised ending of 'Advices' (fols. 154–5) Hand: Ramsay	Latin	<i>Works</i> , vol. 9, pp. 365–87, 424 See also BP 16, fols. 1–71

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 16, fols. 156–201	Unpublished Latin translation of Essay X of <i>Usefulness, II</i> , <i>sect. 2</i> , ‘Of Mens Great Ignorance of the Uses of Natural Things’	Late 17th century	Numbered internally, ‘1’ to ‘89’ Hand: unknown	Latin	<i>Works</i> , vol. 6, pp. 507–40
BP 16, fols. 202–21	MS version of most of Essay III of <i>Usefulness, II</i> , <i>sect. 1</i>	1660s	Missing first four paragraphs; some material added later Hands: D; rounded 1650s	English	<i>Works</i> , vol. 3, pp. 332–49 For a similar version of the first part of this text, see BP 28, fols. 209–35

Volume 17

Folio-size volume; foliated September 1986, replacing earlier erratic pagination; 167 folios. 19th-century contents leaf: Physiology

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 17, fols. 1–36	‘Medica Praescripta Communicata R.B.’, ‘Medical Prescriptions Communicated to R[obert] B[oyle]’	1680s	Latin translation of introduction to collection of medical remedies Hand: Ramsay	Latin	Published in <i>Works</i> , vol. 14, pp. 285–315 For MS versions of two sections of the English text, see BP 38, fol. 23, and MS 199, fols. 32–7
BP 17, fols. 37–8	Three medicines for eyesight, one ‘A Medicine for clearing of the eye-sight found out by Dr. Purlow Sometime Bishop of Hull and Suffragan of York who at the age of 125 years was able to read any Print without Spectacles which att the age of 50 he could not do’	Late 17th century	Hand: unknown	English	

Ref.	Title	Date	Description	Language	Related material
BP 17, fol. 39	Paper concerning worm voided by child	Late 17th century	Hand: unknown	English	
BP 17, fol. 40	Section of text concerning reception of doctrine of circulation of blood	1670s–1680s	Hand: Bacon	English	
BP 17, fols. 41–2	Miscellaneous recipes, medical memoranda, etc.	1670s–1680s	Hand: Bacon	English	Partly published on p. 171, above
BP 17, fols. 43–5	Notes on accounts of the transmutation of metals	1670s–1680s	Hand: Bacon	English	Fol. 43 printed in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 302–4
BP 17, fols. 46–50	Miscellaneous recipes, together with fragment of appendix to <i>Final Causes</i>	c. 1680	Fol. 46a is a variant version of text also in BP 10, fol. 167 Hand: Bacon	English	Fol. 46a published in <i>Works</i> , vol. 14, p. 170. Fol. 48 partly published in L.M. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), p. 143
BP 17, fols. 51–9	Letter from unknown correspondent in Bordeaux giving account of local sorcery case involving a lady called Segur	15 Sept. 1684	Copy letter Hand: unknown	French	
BP 17, fol. 60	‘Some Notable Parnasian Observations’	1670s–1680s	Notes on chemical mixtures Hand: Bacon	English	Partly published in Principe, ‘Boyle’s Alchemical Secrecy’ p. 65
BP 17, fols. 61–2	Note on strange phenomena of vitiated sight	? late 1680s	Probably for intended Appendix to <i>Final Causes</i> . Marked: ‘579’ in margin, upper left Hand: Bacon, corr. by Boyle	English	See <i>Works</i> , vol. 11
BP 17, fol. 63	Notes on how the human body is like an engine	1670s–1680s	Endorsed on verso by Miles Hand: Bacon	English	



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 17, fol. 64	Extract from Fabricius on dropsy	Late 1650s or early 1660s	Probably a discarded version of passage in <i>Usefulness, II, sect. 1</i> , Essay V, chap. X Hand: rounded 1650s	English	<i>Works</i> , vol. 3, pp. 419–20 Linked to BP 38, fol. 29
BP 17, fols. 65–6	MS version of part of <i>Colours</i>	Late 1650s or early 1660s	Dealing with Olearius on climate and black skin, published in part II, experiment XI. The long sentence in square brackets on p. 86 and the following sentence are not found in MS Hand: ?1650s	English	<i>Works</i> , vol. 4, pp. 84–7
BP 17, fol. 67	Medicinal recipe	Late 1650s or early 1660s	Hand: ?	English	
BP 17, fols. 68–70	MS version of parts of <i>Usefulness, II, sect. 1</i>	Late 1650s or early 1660s	Part of chap. XII in Essay V. Fols. 69, 70 and 68 (in that order) are added to text on fol. 78 near start of chap. XII Hand: 1650s	English	<i>Works</i> , vol. 3, pp. 435–7 See also below, fols. 75–107, 112–13
BP 17, fols. 71–4	MS versions of two sections of text of <i>Usefulness, II, sect. 2</i>	Late 1650s or early 1660s	Both from essay on ‘Usefulness of Mathematics’: (i) Text overlapping with, but significantly different from, opening section of essay (fols. 71–3); for more, see BP 38, fol. 27b. (ii) Most of the final paragraph in point ‘3’, missing last few words (fol. 74), which are on top of BP 28, fol. 381 Hand: rounded 1650s (fols. 71–3), italic 1650s (fol. 74)	English	<i>Works</i> , vol. 6, pp. 439–42, 445 See also BP 28, fols. 381–90; BP 38, fol. 27b

Ref.	Title	Date	Description	Language	Related material
BP 17, fols. 75–107	MS version of parts of <i>Usefulness, II, sect. 1</i>	Late 1650s or early 1660s	Chaps. XII to (most of) XIX in Essay V, with some later additions. Fols. 75–7 belong between fols. 91 and 92; fols. 69, 70 and 68 (in that order) are added to text on fol. 78 near start of chap. XII Hand: rounded 1650s	English	<i>Works</i> , vol. 3, pp. 435–70 See also above, fols. 68–70, and below, fols. 112–13
BP 17, fols. 108–11	MS version of part of <i>Usefulness, II, sect. 1</i>	Late 1650s or early 1660s	Three and one-half paragraphs in Essay I, as printed; follows text in BP 10, fols. 120–1. Interspersed with text in BP 8, fols. 3–28 Hand: rounded 1650s	English	<i>Works</i> , vol. 3, pp. 303–6 See also BP 8, fols. 3–28, BP 10, fols. 120–1
BP 17, fols. 112–13	MS version of part of <i>Usefulness, II, sect. 1</i>	Late 1650s or early 1660s	Part of chap. XIX in Essay V, with some later additions Hand: rounded 1650s	English	<i>Works</i> , vol. 3, pp. 469–70 See also above, fols. 75–107
BP 17, fols. 114–5	MS version of part of <i>Ex. 2</i> <i>Obs. Physicae</i>	1670s–1680s	Chap. 4, 1st pentade, Exp. 1, as printed Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 398–400 See also BP 21, fols. 269–71
BP 17, fols. 116–25	Transcript of letters from Malpighi to Spon	Nov. 1681	Hand: unknown	Latin	Malpighi, <i>Opera Omnia</i> , vol. I (London, 1686), last item (‘Epistolae’, pp. 21–35 (sigs. F1–I2)).
BP 17, fols. 126–41	Unpublished Latin translation of ‘Vitiated Sight’ ( <i>Final Causes</i> )	Late 1680s	Incomplete, missing advertisement and observations XI, XII, and XIV Hand: Ramsay	Latin	<i>Works</i> , vol. 11, pp. 157–65
BP 17, fols. 142–4	Italian extract on ‘l’Occhio della Mosca’	1670s	Hand: Bacon	Italian	Perhaps related to ‘Vitiated Sight’ ( <i>Final Causes</i> ), <i>Works</i> , vol. 11
BP17, fol. 145	‘About Barnacles’	1670s–1680s	Passage of text about Munster coast Hand: Bacon	English	

Ref.	Title	Date	Description	Language	Related material
BP 17, fol. 146	Account of ‘a pious and eminent Divine’ suffering from 1680s ‘a Distemper of his eyes that is very extraordinary’	? late 1680s	Hand: Bacon	English	Probably for intended Appendix to ‘Viriated Sight’ ( <i>Final Causes</i> ), <i>Works</i> , vol. 11
BP 17, fols. 147–63	‘The last bundle <save one> of Physiological Memorandums’, 1670s [Workdiary 28, part 1]	Early 1670s	Aphorisms and memoranda for use in writing various (mainly unpublished) essays. Marginal dates include ‘June 25’ (fols. 148, 150), ‘25 Oct.’ (fol. 153), ‘Jan 1 74’ (fol. 154) and ‘May 29’ (fol. 161v) Hand: Slare, Warr, uncertain	English	Workdiary 28, part 1 See also BP 38, fol. 42
BP 17, fol. 164	List of notes and headings for a scientific/medical work	1660s	Hand: E	English	
BP 17, fols. 165–7	Notes on proposition ‘That Beasts may be but Engines’	1660s	Includes possible chapter titles Hands: G, E	English	Published in Y. Conry, ‘Robert Boyle et la doctrine cartésienne des animaux-machines’, <i>Revue d’histoire des sciences</i> , 33 (1980), 69–74, on pp. 70–1

Volume 18

Folio-size volume; foliated September 1986, replacing earlier erratic pagination; 134 folios. 19th-century contents leaf: Physiology

Ref.	Title	Date	Description	Language	Related material
BP 18, fols. 1–7	Sections of text on medical and miscellaneous topics	? 1680s	Fols. 1, 6–7 comprise unpublished introductory matter, apparently intended for sequel to <i>Medicina Hydrostatica</i> (see <i>Works</i> , vol. 11) on <i>materia medica</i> Hands: Bacon, Emes	English	

Ref.	Title	Date	Description	Language	Related material
BP 18, fols. 8–9	Comments on poisons and antidotes	? 1680s	Some similarity to ‘A Paper belonging to the writings about the Mechanical Origine of Qualities’ in <i>Specific Medicines</i> . Reference to Galen on fol. 8v is very similar to passage in fifteenth paragraph of published paper Hand: Bacon	English	<i>Works</i> , vol. 10, p. 363
BP 18, fol. 10	Section of text concerning ‘the state of physick in some of the remoter parts of the world’	1670s–1680s	Hand: Bacon	English	
BP 18, fols. 11–40	Materials for proposed second edition of <i>Human Blood</i>	1680s	Including introductory remarks and materials collected for the planned second edition. Various of these are annotated with the number of the head to which they belong in both the printed list and in the extended, second edition lists Hands: Smith (fol. 11), Bacon, Greg	English	Published in Hunter & Knight, <i>Human Blood</i> , pp. 1–18 Fol. 11 is a copy of MS 185, fols. 15–16. Fol. 12 is a copy of BP 19, fol. 194. Fols. 13–14 are copies of BP 19, fol. 194v. Fol. 35 overlaps with MS 198, fols. 104v–5
BP 18, fol. 41	MS version of secondary titles in <i>Human Blood</i>	c. 1680	Exactly as published Hand: Bacon	English	<i>Works</i> , vol. 10, pp. 40–1 For another copy, see BP 18, fol. 55
BP 18, fol. 42	MS version of ‘Titles of the First Order’ in <i>Human Blood</i>	c. 1680	Exactly as published Hand: Bacon	English	<i>Works</i> , vol. 10, pp. 12–13 For another copy, see BP 18, fol. 54
BP 18, fols. 43–4	‘Heads of the History of human blood’	c. 1680	Unpublished list. The heads listed here are more detailed than those in the printed or second edition lists, and may represent subdivisions, referable to the more general titles Hand: Greg	English	Published in Hunter & Knight, <i>Human Blood</i> , pp. 20–1



Ref.	Title	Date	Description	Language	Related material
BP 18, fols. 45v–46	List of three ‘Preliminary Titles’ 1680s and 42 ‘Titles of the first Order’ prepared for the proposed second edition of <i>Human Blood</i>		The items are annotated with a double set of numbers, one of which notes its place in this list as prepared for the second edition, while the other gives the number of the equivalent category in the printed list, where appropriate Hand: Greg	English	Published in Hunter & Knight, <i>Human Blood</i> , pp. 28–31. For the printed list which this supersedes, see <i>Works</i> , vol. 10, pp. 12–13 For other copies of this list see BP 18, fols. 49v–50, BP 26, fol 46. In the latter, the items are unnumbered. See also BP 18, fols. 56–7
BP 18, fol. 47	Heads concerning the Gall	c. 1680	Hand: Bacon	English	Published in Hunter & Knight, <i>Human Blood</i> , p. 32 See also MS 199, fol. 129
BP 18, fol. 48	List of Heads for <i>Human Blood</i> , c. 1680 etc		List of Heads, including ‘Secondary Titles concerning The Spirit of Humane Blood’ similar to published version but with some reordering. On fol. 48v are (i) Heads concerning arguments from reason and authority, and (ii) Heads for Boyle’s critique of orthodox medicine Hand: Bacon	English	Published in Hunter & Knight, <i>Human Blood</i> , pp. 21–3 Fol. 48r: For the printed list, see <i>Works</i> , vol. 10, pp. 12–13, 40–1 Fol. 48v: (i) See also BP 9, fols. 69–70, 92–3 (ii) Published in M. Hunter, ‘Boyle versus the Galenists’, <i>Medical History</i> , 47 (1997), 322–61, on p. 332; M. Hunter, <i>Robert Boyle, Scrupulosity and Science</i> (Woodbridge, 2000), p. 167 See also BP 18, fols. 133–4
BP 18, fols. 49v–50	List of three ‘Preliminary Titles’ 1680s and 42 ‘Titles of the first Order’ for <i>Human Blood</i>		List of heads prepared for the proposed second edition of <i>Human Blood</i> . The items are numbered in pencil Hand: Bacon	English	See Hunter & Knight, <i>Human Blood</i> , pp. xiii, 28–31. For the printed list which this supersedes, see <i>Works</i> , vol. 10, pp. 12–13 For other copies of this list see BP 18, fols. 45v–6, BP 26, fol 46. In the latter, the items are unnumbered. See also BP 18, fols. 56–7

Ref.	Title	Date	Description	Language	Related material
BP 18, fols. 51–2	‘Materials for the Scheme of Titles of the Second Classis of the Natural History of H. Blood’	1680s	A further list, fuller than the printed version. These are detailed queries, and in some cases a marginal number notes which of the broader categories in the printed list its more detailed query pertains to. One of these heads appears in the list of heads for the second edition Hands: Emes, Greg (title only)	English	Published in Hunter & Knight, <i>Human Blood</i> , pp. 23–5
BP 18, fol. 53	‘Titles of the 1. Order. for the natural History of Humane Blood of Healthy Men’	c. 1680	As published except for one extra head: ‘the motion of H.B. especially that call’d circulation’. A version of this title appears in the list of heads prepared for the second edition of <i>Human Blood</i> Hand: Bacon	English	For the printed version, see <i>Works</i> , vol. 10, pp. 12–13 For the full list prepared for the second edition see BP 18, fols. 45v–46, 49v–50, and BP 26, fol. 46 See also BP 18, fols. 56–7
BP 18, fol. 54	MS version of ‘Titles of the 1. Order for the natural History of Humane Blood of healthy men’	c. 1680	Exactly as published Hand: Emes	English	<i>Works</i> , vol. 10, pp. 12–13 For another copy, see BP 18, fol. 42
BP 18, fol. 55v	‘A list of the secondary Titles concerning the spirit of H.B.’	c. 1680	Exactly as published Hand: Emes	English	<i>Works</i> , vol. 10, pp. 40–1 For another copy, see BP 18, fol. 41
BP 18, fols. 56–7	(i) ‘A Preliminary Title’/ ‘Primary Titles Additional For the History of Human Blood’, (ii) ‘Secondary Titles or Subtitles For the History of Human Blood’	1680s	In two columns on fol. 56r, continuing on fols. 56v–7. This list appears to show the process whereby Boyle expanded the printed list to reach the version prepared for the proposed second edition of <i>Human Blood</i> . The ‘Primary Titles Additional’ consist of titles not present in the printed list, which do appear in the longer list prepared for the second edition. The ‘Subtitles’ listed here were originally	English	Published in Hunter & Knight, <i>Human Blood</i> , pp. 25–8. For the printed version, see <i>Works</i> , vol. 10, pp. 12–13. For the full list prepared for the second edition see BP 18, fols. 45v–6, 49v–50, and BP 26, fol. 46

Ref.	Title	Date	Description	Language	Related material
referred to the relevant head in the printed list, using the numbers established there. These numbers were subsequently replaced with a series which refer the subtitle to the relevant category in the second edition list Hands: Greg, Emes					
BP 18, fols. 58–9	‘Titles of the 1. Classis for the Natural History of Human Urine, emitted by Healthy Men’	c. 1680	Exactly as printed except missing first title in the Appendix. Fol. 59 is copy of fol. 58 Hands: Greg (fol. 58), Bacon (fol. 59)	English	<i>Works</i> , vol. 10, pp. 15–16
BP 18, fols. 60–1	Extracts from travellers’ accounts dealing with medical matters, etc.	1670s–1680s	Hand: Bacon	English	
BP 18, fols. 62–3	MS version of part of <i>Exp. &amp; Obs. Physicae</i> and related material	1670s–1680s	Text of ch. IV, first pentade, exp. 1, points II and III, and unpublished paragraph relating to it. Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 400–1, 398–400
BP 18, fol. 64	Unpublished text relating to <i>Christ. Virt., II</i>	? 1680s	Unpublished paragraph on design as seen in female silkworms, endorsed ‘C.V. pt II section 1 or F.C.’ Published version contains a paragraph on silkworms; see ‘Aphorism VT’ in section 1 Hand: Bacon	English	See <i>Works</i> , vol. 12, p. 445
BP 18, fols. 65–76	Sections of text on medical topics, including prefatory material concerning ‘parable medicines’	1670s–1680s	Fol. 65 set out as letter. Some items overlap with the preface to <i>Medicinal Experiments</i> . Fol. 72 comprises a section of text printed in <i>Human Blood</i> with a five-line introduction which does not appear here Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 180, 209–12; vol. 10, pp. 83–4

Ref.	Title	Date	Description	Language	Related material
BP 18, fols. 77–8	MS version of part of <i>Specific Medicines</i>	c. 1680	Proposition VI, paragraphs 8–11 and part of 12 (ends mid-sentence on fol. 77v); text on fol. 78v precedes text on fol. 77. Marginal addition on fol. 78v, which continues on fol. 77, is marked for insertion on fol. 77. Two unpublished passages: paragraph on fol. 78 about purgatives and final sentence on fol. 77, continuing with the first sentence on fol. 77v (all crossed through). Half-size sheets, perhaps from a notebook. Hand: Greg	English	<i>Works</i> , vol. 10, pp. 393–6, including previously unpublished material
BP 18, fol. 79	MS version of part of ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	c. 1680	Proposition I, opening paragraph Hand: A	English	<i>Works</i> , vol. 10, pp. 308–9
BP 18, fol. 80	Unpublished passage about ‘the Chymicall way of examininge Drugs’	c. 1680	Perhaps intended for Boyle’s planned <i>Medicina Chromatica</i> Hand: C	English	See <i>Works</i> , vol. 14, p. xxxiiiia
BP 18, fols. 81–2	Text of planned appendix to <i>Specific Medicines</i>	? 1680s	Commenting on ‘some Passages deliver’d in the foregoing Paper [about ‘the Wayes that Specific Medicines may operate by’], about cathartics and purgatives Hand: Greg	English	See <i>Works</i> , vol. 10 See also BP 18, fols. 85–9
BP 18, fol. 83	MS version of part of <i>Human Blood</i>	c. 1680	Opening paragraph in part II virtually identical to published version, except that a few phrases were there added Hand: Greg	English	<i>Works</i> , vol. 10, p. 17
BP 18, fol. 84	Recipe mixing ‘the blood of a hermaphrodite and the blood of a sound Ruddy Complexioned woman’	Late 17th century	Perhaps intended for sequel to <i>Human Blood</i> Hand: uncertain	English	



Ref.	Title	Date	Description	Language	Related material
BP 18, fols. 85–9	Text of planned appendix to <i>Specific Medicines</i>	? 1680s	Continuing from BP 18, fols. 81–2 Hand: Greg	English	See <i>Works</i> , vol. 10
BP 18, fols. 90–1	Two passages for <i>Usefulness, II</i> , <i>sect. 1</i>	1650s	Marked for insertion at specific points of other texts: (i) Section of text inserted in margin of BP 8, fol. 11, and published in Essay I (ii) Passage overlapping published text of Essay V in several places Hand: rounded 1650s	English	(i) <i>Works</i> , vol. 3, p. 301; (ii) <i>ibid.</i> , pp. 424–5, 441–2, 447–8
BP 18, fol. 92	Unpublished experiment on a viper in an evacuated receiver	c. 1663	Similar to those in title II of ‘Respiration’ ( <i>Phil. Trans.</i> , 1670) and probably intended for publication there. Endorsed ‘To the 41 Experiment’. Hand: uncertain	English	Published in <i>Works</i> , vol. 6, pp. xxxvi–xxxvii
BP 18, fol. 93	Discarded version of part of <i>Final Causes</i>	1680s	Overlapping with section IV, proposition III, paragraph 5; identical in content (but not wording) with published text Hand: Greg	English	Published in <i>Works</i> , vol. 11, p. 131 For another draft, see MS 199, fol. 16
BP 18, fols. 94–5	‘A Continuation of Physiologicall Entries’ [Workdiary 20]	Early 1660s	Experiments and observations involving oil of vitriol, turpentine, a ‘venercal gum’, etc. Marginal dates from ‘July 9th’ to ‘July 10th’ Hand: E	English	Workdiary 20 The following entry was used in a book by Boyle: 20–6 (fol. 94v), <i>Mechanical Qualities</i> , <i>Works</i> , vol. 8, p. 355.
BP 18, fol. 96	MS version of part of ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	Early 1680s	Proposition III, paragraph 28; followed by text on BP 38, fol. 36 Hand: Emes, addns by Boyle and Bacon	English	<i>Works</i> , vol. 10, pp. 332–4

Ref.	Title	Date	Description	Language	Related material
BP 18, fol. 97	Unpublished note concerning an experiment with galls producing a purple colour in ‘the German Spaw-water’	1680s	Hand: Greg	English	Related to section IV, paragraph 3 of <i>Mineral Waters</i> ( <i>Works</i> , vol. 10, p. 225)
BP 18, fol. 98	MS version of part of ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	Early 1680s	Continues text in BP 18, fol. 96. Text on fol. 98v precedes fol. 98r. Sentence citing Platerus on Brazil was a later addition to the margin of fol. 98. Hand: Emes, addns by Boyle and Bacon	English	<i>Works</i> , vol. 10, pp. 332–4
BP 18, fols. 99–100	Material relating to <i>Exp. &amp; Obs. Physicae</i>	c. 1680	Alternative version of ‘Advertisement’ to chapter IV’ Hand: B	English	See <i>Works</i> , vol. 11, pp. 397–8 Copied out in BP 36, fol. 12 For MS of published version, see BP 35, fol. 209
BP 18, fols. 101–2	Dr Davies’ prescription for Boyle	30 July 1649	?Holograph	English	
BP 18, fols. 103–4	MS version of part of <i>Notion of Nature</i>	c. 1680	Section VI, paragraphs 28–32, slightly reworted. Endorsed: ‘About Crises’. Continued on BP 2, fol. 190 Hand: C	English	<i>Works</i> , vol. 10, pp. 511–12
BP 18, fols. 105–9	MS version of part of <i>Notion of Nature</i>	c. 1680	Section VII, axiom VI, paragraphs 8–16, most of paragraph 18. Begins mid-sentence on fol. 107, subsequent leaves misbound: the correct order is fols. 107–8, 105–6, 109. Lacuna on pp. 545–6 matches passage omitted in Latin editions. Some additional material inserted later, including passage from MS 199, fol. 150 Hand: B, corr. by Boyle?	English	<i>Works</i> , vol. 10, pp. 542–8, p. 549 with lacuna on pp. 545–6

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 18, fols. 110–11	MS version of part of <i>Notion of Nature</i>	c. 1680	Section VI, paragraph 36, with material deleted Hand: A	English	<i>Works</i> , vol. 10, pp. 514–16
BP 18, fols. 112–13	Material relating to <i>Notion of Nature</i>	c. 1680	Section IV, paragraph 8 (continuous with fol. 117v). Lower half of fol. 112 and all of fol. 113 were not printed in original edition Hands: B, correc by Boyle?; C on most of fol. 112	English	<i>Works</i> , vol. 10, pp. 464–8 Unpublished section published in <i>Works</i> , vol. 14, pp. 160–1
BP 18, fol. 114	MS version of part of <i>Notion of Nature</i>	c. 1680	End of section II Hand: C	English	<i>Works</i> , vol. 10, pp. 456–8
BP 18, fols. 115–16	Material relating to <i>Notion of Nature</i>	c 1680	Unpublished; on Boyle’s inability to see the advantages to religion of the vulgar notion of nature Hand: C (fol. 115), B (fol. 116)	English	Published in <i>Works</i> , vol. 14, pp. 155–7
BP 18, fols. 117–18	Material relating to <i>Notion of Nature</i>	c. 1680	Lower half of fol. 117v (and top half of 112) (which follows continuously) printed as paragraph 8 in section IV. Fol. 118 is clean copy of most of 117; top of 117 and 118 partly printed in section IV, paragraph 7; the very end of both printed in section IV, paragraphs 9–10 Hand: B, corr. by Boyle?; C on bottom of 117v	English	<i>Works</i> , vol. 10, pp. 464–8
BP 18, fol. 119	Material relating to <i>Notion of Nature</i>	c. 1680	Unpublished; overlaps with part of section IV ( <i>Works</i> , vol. 10, p. 478) where Boyle discusses heathen belief in the soul of the world. A passage from Seneca quoted at length in the printed text is cited briefly in the MS Hand: B, with last few words by Boyle	English	Published in <i>Works</i> , vol. 14, pp. 161–2

Ref.	Title	Date	Description	Language	Related material
BP 18, fols. 120–1	MS version of part of <i>High Veneration</i>	c. 1680	Points 15–16, virtually identical with published version Hand: C	English	<i>Works</i> , vol. 10, pp. 169–70
BP 18, fols. 122–4	‘Of Subterranean Steams’	? 1660s	Earlier version of last section of BP 21, pp. 87–153 Hand: A	English	Published in <i>Works</i> , vol. 13, pp. 419–23
BP 18, fol. 125	List of headings, probably for medical treatise	1680s	Hand: Greg	English	
BP 18, fol. 126	‘The great French Lythotomists Receipt For the stone in the bladder’	Late 17th century	Hand: unknown	English	
BP 18, fol. 127	MS version of title III, experiment I, of ‘Respiration’ ( <i>Phil. Trans.</i> , 1670)	9 Sept. 1662	Exactly as published Hand: D	English	<i>Works</i> , vol. 6, p. 219
BP 18, fol. 128	MS version of experiment XX, second trial, of <i>Spring, 1st Continuation</i>	6 Sept. 1662	Dated on verso Hand: D	English	<i>Works</i> , vol. 6, p. 87 Copied in BP 26, fol. 106
BP 18, fol. 128v	MS version of title III, experiment III, of ‘Respiration’ ( <i>Phil. Trans.</i> , 1670)	6 Sept. 1662	Exactly as published Hand: D	English	<i>Works</i> , vol. 6, p. 220 Copied in BP 26, fol. 53
BP 18, fols. 129–30	‘Anatomical Expts To be try’d’ (pencil endorsement) on animal nerves and on the heads of newborn puppies	1660s	Hand: F	English	Published in Hunter, <i>Heads of Inquiries</i> , pp. 9–12



Ref.	Title	Date	Description	Language	Related material
BP 18, fols. 131–2	A fantastical plant in Rome, allegedly grown by Kircher by the effect of heat on a mixture placed in glass	Late 17th century	Hand: uncertain	English	
BP 18, fols. 133–4	‘Considerations and Doubts Touching the vulgar Method of Physick’	1660s	Hand: E	English	Published in M. Hunter, ‘Boyle versus the Galenists’, <i>Medical History</i> , 47 (1997), 322–61, on pp. 350–2; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 187–9 See also BP 17, fol. 48v

Volume 19  
Quarto-size volume; foliated; 300 folios. 19th-century contents leaf: Physiology.

Ref.	Title	Date	Description	Language	Related material
BP 19, fols. 1–35	Richard Lower’s transcript of Thomas Willis’ 1661 lectures on the senses and on neurological disorders	Late 17th century	Hand: uncertain	Latin	See Kenneth Dewhurst, <i>Thomas Willis’ Oxford Lectures</i> (Oxford, 1980), p. 43 and passim
BP 19, fols. 36–56	56 ‘Of Swimming and Diveing: Some Experiments & Inquiries, with Proposals’	Late 17th century	Holograph treatise by John Beale	English	
BP 19, fols. 57–77	‘Dris J.J. Becheri Concordantia Purgationis’	1670s–1680s	Latin treatise by Becher on chemistry, especially experimentation with mercury in search of philosopher’s stone	Latin	Published in Becher’s <i>Tripus hermeticus fatidicus</i> (1689). See Principe, <i>Aspiring Adept</i> , p. 113

Ref.	Title	Date	Description	Language	Related material
BP 19, fols. 78–130	Miscellaneous items, mainly in French, including ‘Montue Chritique et Medicinale’, astrological rules for judgement in illnesses (fols. 81–8) and various notes, recipes, etc., mainly medical	Late 17th century	Also included are a list of parishes or monasteries (fol. 78), two pages of a Latin treatise (fols. 80, 92), and a paper dial (fol. 82). The whole appears to comprise a disbound notebook, the content of which may no longer be in the correct order; fols. 125–6, ‘vers osteologiques’, are apparently intrusive. Fols. 125–6 are in a smaller format, as is fol. 79. Hand: Various hands	French, Latin	
	Part of a letter addressed to Father Antoine, a Capuchin at ?Ganat	Late 17th century	Hand: unknown	French	
BP 19, fol. 131					
BP 19, fol. 132	‘Ex Communicatione D. Polemanni Syrupus contra Calculum’	Mid 17th century	Copy of recipe for a syrup against urinary calculus Hand: Hartlibian scribal hand	Latin	A copy survives in Bodleian Library MS Locke c. 44, p. 125
BP 19, fol. 133–4	‘Ofenliche Fragen, das ein Ahl seinen andern gebietet, sondern das sie faulen Erdreich, Schlammms und Schilfff gebohren werden’	Late 17th century	German extract; endorsed ‘A Dutch Note/ De Anguill. ortu’ Hand: unknown	German	
BP 19, fols. 135–6	‘An Extract out of a Paper printed in Low-Dutch and dated 16/26 May 1659’, extract from de Bils’ <i>Large Act of Anatomy</i>	1659	Partly overlapping with the text of de Bils’ tract as published under Boyle’s auspices in 1659, though text on fol. 136 diverges from it Hand: unknown (not John Pell)	English	<i>Works</i> , vol. 1, pp. 45–6

Ref.	Title	Date	Description	Language	Related material
BP 19, fol. 137	List of letters and papers on medical matters, together with calculations and shorthand notes	c. 1740	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx
BP 19, fols. 138–9	MS version of several receipts from <i>Medicinal Experiments</i>	? 1680s	Originally printed in 1688 collection, reprinted in subsequent editions, lacking titles: Decad I, nos. 3, 5, 9; Decad II, nos. 5, 6, 8, 9; Decad III, nos. 1, 2 (opening phrase only), 3 Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 178–81; vol. 12, pp. 187–90
BP 19, fols. 140–4	Miscellaneous recipes, etc., in French	1670s–1680s	Hands: Bacon, ?	French	
BP 19, fols. 145–66	‘De Konste der glazen’	Late 17th century	Dutch paper about making glass, starting with list and cost of ingredients. Hand: unknown	Dutch	
BP 19, fols. 167–8	Memoranda concerning subject matter of intended book	1660s	Hands: F, K	English	
BP 19, fols. 169–71	Incomplete paper dealing with motion and the air	Late 17th century	Hand: unknown	Latin	
BP 19, fols. 172–8	Recipes and other miscellaneous papers	Late 17th century		Latin, English, French	Fol. 175 is a French recipe for animating common mercury with regulus of antimony. See <i>Principe, Aspiring Adept</i> , p. 170
BP 19, fol. 179	MS version of part of <i>Spring, 1st Continuation</i>	1660s	Final paragraph of experiment XXX, exactly as printed Hand: E	English	<i>Works</i> , vol. 6, p. 113

Ref.	Title	Date	Description	Language	Related material
BP 19, fols. 180–1	Fransois du Laurens, ‘Invitatur quicunque sponsonem vult suscipere super inventione duarum mediarum Proportionalium’	Late 17th century	Geometrical observation Hand: unknown	Latin	
BP 19, fols. 182–3	Notes on ‘oyl of egg’ used by painters	Late 17th century	Hand: Bacon?	English	
BP 19, fol. 184	‘The Omitted Experiments’	February 1668	List of hydrostatical experiments apparently left out of <i>Spring</i> , 1st Continuation. Endorsed on verso: ‘Febr. 24. 1667/8. Received by me Henry Oldenburg from Mr Boyle’. Hands: E, J, K, Oldenburg	English	See <i>Works</i> , vol. 6, p. xvi
BP 19, fols. 185–6	Miscellaneous medical notes, recipes, etc.	Late 17th century	Various hands	English, Latin	
BP 19, fols. 187v–8	‘The Excuses of Philaletha for concealing the great Arcanum’	1670s–1680s	Hand: Bacon	English	Published in W. R. Newman, <i>Gebennical Fire</i> (Cambridge, Mass., 1994), pp. 254–5
BP 19, fols. 189–91	Fragment of Italian version of <i>Picatrix</i> and another extract	Late 17th century	Hand: unknown	Italian, Latin	
BP 19, fols. 192–3	‘Scaping into his Study out of a Crowd of extraordinarily vaine Company of both Sexes’	c. 1740	Copy by Miles of text in BP 37, fols. 166–7	English	Published in <i>Works</i> , vol. 13, pp. 141–4 See BP 37, fols. 166–7
BP 19, fol. 194	MS version of ‘Advertisement’ for second edition of <i>Human Blood</i>	c. 1680	Hand: Greg	English	Overlapping with comments published in the ‘Postscript’ ( <i>Works</i> , vol. 10, p. 96) Copied out on BP 18, fols. 12–14; see Hunter & Knight, <i>Human Blood</i> , pp. ix–x, 2–3



Ref.	Title	Date	Description	Language	Related material
BP 19, fol. 195	MS version of part of <i>Porosity</i>	Early 1680s	Two paragraphs in 'Porousness of Solid Bodies', chapter VIII, on sheet torn from a notebook: (i) Opening part of 3rd paragraph from the end, final line left unfinished and connection with previously written material indicated (see BP 9, fols. 191–204) (ii) Paragraph about fire on pp. 134–5, complete Hand: Greg	English	<i>Works</i> , vol. 10, pp. 153, 150
BP 19, fols. 196–7	Material relating to <i>Porosity</i> and French extract	Late 17th century	Fol. 196 is an unpublished passage about 'superficies' and mercury travelling through pores. Perhaps a discarded draft, related either to 'Porousness of Animal Bodies', chapter III, or to 'Porousness of Solid Bodies', chapter IV Hand: uncertain	English, French	See <i>Works</i> , vol. 10
BP 19, fols. 198–202	List of English and Latin phrases	Late 17th century	Hand: Warr sen	English, Latin	
BP 19, fols. 203–5	List of phrases from ?Spanheim	Late 17th century	Hand: Warr sen	Latin	
BP 19, fols. 206–53	Incomplete medical/chemical treatise	Late 17th century	The start appears to be on fol. 217, which has 'The occasion of writing the following Treatise', and heading to chapter 1 Hand: Warr sen	English	
BP 19, fols. 254–67	Part of political/religious tract, lacking opening.	Late 17th century	Hand: Warr sen	English	
BP 19, fols. 268–81	Extracts from classical texts and other notes	Late 17th century	Hand: Warr sen	English, Latin	

Ref.	Title	Date	Description	Language	Related material
BP 19 fols. 282–97	Incomplete astrological treatise	Late 17th century	Hand: ?Warr sen	English	
BP 19, fols. 298–300	Fragment of astrological treatise	Late 17th century	Hand: unknown	English	

Volume 20

Folio-size volume; paginated; 576 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 20, pp. 1–18	Hooke’s paper concerning Newton’s theory of light	1672	Head: unknown	English	Birch, <i>Royal Society</i> , vol. 3, pp. 10–15
BP 20, pp. 19–34	Sir Christopher Wren’s ‘De Corpore Saturni’	1658	Scribal copy. With diagrams of Saturn (fol. 31) and endorsements (fol. 34)	English	See Van Helden in <i>NRRS</i> , 23 (1968), 213–29 (incl. pp. 216–17 on this copy; translation on pp. 219–26); Christiaan Huygens, <i>Oeuvres complètes</i> , vol. 3 (The Hague, 1890), pp. 419–25
BP 20, pp. 35–88	‘Commentarii Experimentales de Mechanica Productione Lucis’, ‘Experimental Notes on the Mechanical Production of Light’	? 1680s	Hand: Ramsay	Latin	Published in <i>Works</i> , vol. 14, pp. 3–31
BP 20, pp. 89–155	Unpublished Latin translation of ‘Hydrostatical Discourse’ in <i>Flame and Air</i>	? 1680s	Ending mid-sentence in section II, chapter IV. For more, see BP 22, pp. 559–622. P. 156 blank Hand: Ramsay	Latin	See <i>Works</i> , vol. 7, pp. 139–84

Ref.	Title	Date	Description	Language	Related material
BP 20, pp. 157–8	Wren’s hypothesis of motion	1668	Read at the Royal Society, 17 December 1668. Latin See Birch, <i>Royal Society</i> , vol. 2, p. 335 Hand: N	Latin	<i>Phil. Trans.</i> , 3 (1669), 867–8
BP 20, pp. 159–68	Christiaan Huygens’ hypothesis of motion	1669	Pp. 166–8 blank See Birch, <i>Royal Society</i> , vol. 2, p. 337 Hand: N	English	Christiaan Huygens, <i>Oeuvres complètes</i> , vol. 6 (The Hague, 1895), pp. 336–43 See also BP 25, pp. 137–44
BP 20, pp. 169–72	‘Dr. Croon’s Hypothesis of Motion’	1660s–1670s	Read at the Royal Society, 25 January 1669. See Birch, <i>Royal Society</i> , vol. 2, p. 340. Latin text with diagrams Hand: N	Latin	
BP 20, pp. 173–80	Joseph Glanvill’s ‘Additional Answeres’ to the queries concerning mines compiled by Boyle	1667–8	For Boyle’s queries, see <i>Works</i> , vol. 5, pp. 529–40. Pp. 179–80 blank Read at the Royal Society, 22 Oct. 1668. See Birch, <i>Royal Society</i> , vol. 2, p. 315 Hand: N	English	<i>Phil. Trans.</i> , 2 (1667), 525–7, and 3 (1668), 767–71 (with slight variations)
BP 20, pp. 181–8	William Neile’s hypothesis of motion	1660s–1670s	Pp. 187–8 blank Read at the Royal Society, 29 April 1669. See Birch, <i>Royal Society</i> , vol. 2, p. 361 Hand: N	English	
BP 20, pp. 189–92	Animadversions by Francis Willughby on Wren and Huygens’ new theory of motion main text to p. 191, then comments on it by Wren and Brouncker, together with ‘The Cases of Motion are but three, as is thus made out’ by Brouncker	1669	Presented to the Royal Society, 10 June 1669. See Birch, <i>Royal Society</i> , vol. 2, pp. 381–2 Hand: N	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 20, pp. 193–5	William Schroter, ‘The manner of making at Norimberge in Germany the Foliers, which the Goldsmiths use to put under pretious stones’	1671	Presented to the Royal Society, 9 November 1671 Hand: N	English	Birch, <i>Royal Society</i> , vol. 2, pp. 489–90
BP 20, pp. 195–200	Robert Boyle, ‘The Phaenomena of an Experiment about Freezing’	1671	Presented to the Royal Society, 23 November 1671. See Birch, <i>Royal Society</i> , vol. 2, pp. 492–5 Hand: N	English	Published in ‘Appendix’ to 2nd edn of <i>Cold, Works</i> , vol. 4, pp. 555–8
BP 20, pp. 201–5	Queries for a voyage to Hudson’s Bay, with answers	1672	Read at the Royal Society, 18 April 1672 Hand: N		Birch, <i>Royal Society</i> , vol. 3, pp. 43–6
BP 20, pp. 207–14	[Christopher Merrett], ‘The Art of refining’	[1662]	Hand: N	English	<i>Phil. Trans.</i> , 12 (1678), 1046–52. See Cl.P. 9(1)1
BP 20, pp. 215–20	‘Concerning the makeing of Allum’s by Mr. Colwall’	[1662]	Including ‘the charge of a worke’ – list of how many men required for each type of manufacturing process – which is not in the <i>Phil. Trans.</i> version Hand: N	English	<i>Phil. Trans.</i> , 12 (1678), 1052–6. See Cl.P. 9(1)3
BP 20, pp. 221–30	[Jonathan Goddard] ‘Experiments of refining gold with Antimony, the first with several parcells of Antimony’	[1662]	See Birch, <i>Royal Society</i> , vol. 1, p. 79 Hand: N	English	<i>Phil. Trans.</i> , 12 (1678), 953–61
BP 20, pp. 231–4	[Robert Hooke] ‘An Account of the Diversity of the parts of Water’	1662	P. 234 blank. Presented to the Royal Society, 17 December 1662 Hand: N	English	Birch, <i>Royal Society</i> , vol. 1, pp. 153–4
BP 20, pp. 235–40	‘A Briefe account of the Experiments tryed with glass Balls by Mr. Hooke’	1662	Presented to the Royal Society, 26 November 1662 Hand: N	English	Birch, <i>Royal Society</i> , vol. 1, pp. 127–30



Ref.	Title	Date	Description	Language	Related material
BP 20, pp. 241–6	‘An account of the Rarefaction of the Aire by Mr. Hooke’	1662	P. 246 blank. Presented to the Royal Society, 10 December 1662 Hand: N	English	Birch, <i>Royal Society</i> , vol. 1, pp. 141–4
BP 20, p. 247	Jonathan Goddard, ‘An Experiment of Exhalation raised from water, and returning to water againe’	1662	Presented to the Royal Society, 17 December 1662 Hand: N	English	Birch, <i>Royal Society</i> , vol. 1, p.155
BP 20, pp. 248–51	Robert Hooke, ‘Of the difference of gravity by removing the body further from the surface of the earth upwards’ and ‘Of Driving water out of a Glass by its own vapours’	1662	Presented to the Royal Society, 24 December 1662 Hand: ?	English	Birch, <i>Royal Society</i> , vol. 1, pp. 163–5
BP 20, pp. 251–5	Robert Hooke, ‘An Account of some tryalls for finding the pressure of the parts of water upon one another. And the Elastical power of the Aire’	1663	Presented to the Royal Society, 28 January 1663 Hand: N	English	Birch, <i>Royal Society</i> , vol. 1, pp. 180–2
BP 20, pp. 255–7	Experiment by Robert Hooke: ‘Of the Refraction of Ice’	1663	Presented to the Royal Society, 11 February 1663. See Birch, <i>Royal Society</i> , vol. 1, p. 193 Hand: N	English	Hooke, <i>Philosophical Experiments</i> (London, 1726), pp. 24–6
BP 20, pp. 257–60	Experiment by Robert Hooke: ‘A Description of the Instrument for finding the force of falling bodyes’	1663	Hand: N	English	Birch, <i>Royal Society</i> , vol. 1, pp. 195–7
BP 20, pp. 261–4	Robert Hooke, ‘Experiments proposed to be made in the compressing Engine’	1663	Presented to the Royal Society, 13 May 1663. See Birch, <i>Royal Society</i> , vol. 1, p. 238; Cl.P. 20.17 Hand: N	English	

Ref.	Title	Date	Description	Language	Related material
BP 20, pp. 264–7	Robert Hooke, ‘Observables in the six Branched figures frozen in Urine’, ‘Figures observ’d in water, Frozen’ and ‘Figures observ’d in Snow’, 17 December 1662	1662	See <i>Micrographia</i> (London, 1665), pp. 88–93: a slightly modified and extended version Hand: N	English	
BP 20, pp. 268–72	Christopher Merret, ‘An account of the Tin Mynes & workings of Tin in the county of Cornwall	1663	Read at the Royal Society, 16 December 1663. See Birch, <i>Royal Society</i> , vol 1, p.345 Hand: N	English	<i>Phil. Trans.</i> , 12 (1678), 949–52
BP 20, pp. 273–5	Jonathan Goddard, ‘An Experiment of spirit of wine in a vessel exhausted of Aire’	1664	Presented to the Royal Society, 23 March 1664 Hand: N	English	Birch, <i>Royal Society</i> , vol. 1, pp. 397–9
BP 20, p.276	Jonathan Goddard, ‘Observations upon the Experiments of several liquors in a Tube of about 36 foot in length, erected perpendicularly’	1664	Presented to the Royal Society, 17 August 1664 Hand: N	English	Birch, <i>Royal Society</i> , vol. 1, p. 459
BP 20, pp. 277–8	‘Of the Resistance of aire to bodyes, moved through it, by Mr. Hooke’	1662/3	Presented to the Royal Society, 4 March 1662/3 Hand: N	English	Birch, <i>Royal Society</i> , vol. 1, p. 205
BP 20, pp. 278–81	‘Some Considerations about the most likeliest way of settling a universal measure by the help of Pendulums by Mr. Hooke’	1660s	Cf. CL.P. 20.34 Hand: N	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 20, pp. 281–3	‘Of the Effects of Tobaccoe oyle. by Mr. Daniel Cox. May 3rd 1665’	1665	Read at the Royal Society, 3 May 1665. See Birch, <i>Royal Society</i> , vol. 2, p. 42 Hand: N	English	
BP 20, pp. 283–9	Henry Powle, ‘The History of Iron, or an Account of the manner of its Preparation in the Forrest of Deane’	1666	Read at the Royal Society, 2 May 1666. See Birch, <i>Royal Society</i> , vol. 2, p. 86 Hand: N	English	<i>Phil. Trans.</i> , 12 (1678), pp. 931–5
BP 20, pp. 289– 92	Of the Inflection of a direct ‘motion into a Curve by a supervening Attractive principle. by Mr. Hooke’	1666	Read at the Royal Society, 23 May 1666 Hand: N	English	Birch, <i>Royal Society</i> , vol. 2, pp. 90–2
BP 20, pp. 293–5	‘An Account of Pendulums. by Mr. Hooke	1666	Read at the Royal Society, 21 November 1666 Hand: N	English	Birch, <i>Royal Society</i> , vol. 2, pp. 126–7
BP 20, pp. 295–7	Letter from Sir William Curtius to Theodore Haak on the origin of frankincense	30 August 1667	Read 3 October 1667 Hand: N	English	Birch, <i>Royal Society</i> , vol. 2, pp. 194–5
BP 20, pp. 297–9	‘Some Experiments concerning respiration, upon a Foetus, taken out of the Womb of a Mastife bitch: made by Mr. Hooke’	1667	Presented to the Royal Society, 19 December 1667 Hand: N	English	Birch, <i>Royal Society</i> , vol. 2, pp. 232–3
BP 20, pp. 299– 304	Some wayes of Discovering ‘the various pressure of the Aire, at sea, by Mr. Hooke’	1667	Read at the Royal Society, 2 January 1666/7. See Birch, <i>Royal Society</i> , vol. 2, p. 235; <i>Correspondence</i> , vol. 4, p. 2. Pp. 302–4 blank Hand: N	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 20, pp. 305–404	‘Of the Existence of the Lapidescnt Juice’ (305–15); ‘Of the Difference of Lapidescnt Juices’ (317–33); and further papers on petrification and lapidescnt juices (pp. 335–404).	1660s	Papers on petrification Hands: E, H, F, G, uncertain	English	Published in <i>Works</i> , vol. 13, pp. 377–402
BP 20, pp. 405–20	A Description of the Diamond ‘Mines’	1660s – 1670s	Cf. BP 39, pp. 218–22. Incomplete at end, but a paragraph which appears on fols. 219–20 there is omitted here. Pp. 419–20 blank Hand: N	English	
BP 20, pp. 421–2	Thomas Allen, ‘An Account of the losse of a Part of a Man’s braine without any considerable Prejudice to the Patient’	1667	Read at the Royal Society, 27 February 1667/8 Hand: N	English	Birch, <i>Royal Society</i> , vol. 2, pp. 252–3
BP 20, pp. 422–5	‘The manner of Hatching Chicken at Cairo, observed by Mr. John Graves [sic] 1639’	c. 1668	Communicated to the Royal Society by Sir George Ent, 5 March 1667/8. See Birch, <i>Royal Society</i> , vol. 2, p. 255 Hand: N	English	<i>Phil. Trans.</i> , 12 (1677), pp. 923–5
BP 20, pp. 425–7	Robert Hooke, ‘An account of an Experiment of Statickes, to Examine the Incorporateing of Liquors	1668	‘Made before the Royal Society. May 14, 1668’ Hand: N	English	Birch, <i>Royal Society</i> , vol. 2, pp. 284–5
BP 20, pp. 427–8	‘An Account brought in by Mr. Hooke Of an Experiment made before the Society May 28 1668 To show the Dilatation of Bodies &c’	1668	See Birch, <i>Royal Society</i> , vol. 2, p. 287; no copy referred to Hand: N	English	



Ref.	Title	Date	Description	Language	Related material
BP 20, pp. 429–576	Book II of treatise in French on the philosopher’s stone by ‘Pierre Videcur’	17th century	i.e. Pierre Vicot, <i>Le Grand Olympe</i> . Hand: N	French	See Paul Kunze (ed.), <i>Le Grand Olympe: ein Alchemistische Deutung von Ovids Metamorphosen</i> (Halle, 1912)

Volume 21  
Folio-size volume; paginated; 562 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 21, pp. 1–86	Unpublished Latin translation of part of <i>Producibleness</i>	? 1680s	Starting in the middle of part IV and continuing to part VI (end of treatise); pp. 84–5 blank; p. 86 cover sheet Hand: Ramsay	Latin	See <i>Works</i> , vol. 9, pp. 19–120. For more, see BP 23, pp. 219–305 and 511–55
BP 21, pp. 87–127	‘Of Subterranean Steames As they are capable of affecting the Aire’	1660s–1670s	Treatise on subterranean effluvia, and meteorological, volcanic, etc., phenomena related to them Hands: Bacon, C (p. 95), E (p. 115) Slare (p. 117), A (p. 127)	English	Published in <i>Works</i> , vol. 13, pp. 405–17 See also BP 10, fol. 35
BP 21, pp. 129–32	Henry Power’s paper, dated 14 October 1662, on subterranean experiments and damp in coal mines	14 October 1662	Copy (lacking diagram and key: see BP 41, fol. 154) Hand: Oldenburg	English	Birch, <i>Royal Society</i> , vol. 1, pp. 133–6 See also BP 41, fol. 154

Ref.	Title	Date	Description	Language	Related material
BP 21, pp. 133–53	Continuation of ‘Of Subterranean Steames As they are capable of affecting the Aire’	1660s–1670s	Observations on subterranean steams in mines in Hungary, Devonshire, etc., and a brief discourse on subterranean stones and estuaries, and other probable receptacles of combustible materials beneath the ground. The next item, Workdiary 40, part 1, is bound into the middle of this. Hands: Slare (pp. 133–5), Bacon, A	English	Published in <i>Works</i> , vol. 13, pp. 417–23 See also BP 18, fols. 122–4
BP 21, p. 142	‘A Continuation of Promiscuous Addenda’ [Workdiary 40, part 1]	1680s	Account of nephritic stone. Bound into the middle of the text on ‘subterranean steams’, BP 21, pp. 133–53 Hand: Bacon	English	Workdiary 40, part 1 See also BP 38, fol. 24
BP 21, pp. 155–89	Discourse on the Nature and Effects of the Earth’s Magnetism	1670s–1680s	Pp. 187 and 189 are in the wrong order Hand: Bacon	English	Published in <i>Works</i> , vol. 14, pp. 121–32
BP 21, pp. 191–218	‘The XVI Century’: [Workdiary 37]	1686 – 1690	112 numbered experiments, mostly on weighing of assorted materials, calcination and other chemical processes, antidotes, respiration etc., with a few additional notes at end. Dated from 29 December 1686 to 4 September 1688, with supplementary series 17 December 1689 to 5 February 1690; titles/comments on experiments in margin Hands: Greg, Smith, uncertain	English	Workdiary 37 The following entries were used in books by Boyle: 37–82 (p. 212), <i>Medicina Hydrostatica</i> , <i>Works</i> , vol. 11, p. 262 37–88b to 90 (pp. 213–5), <i>Medicina Hydrostatica</i> , <i>Works</i> , vol. 11, pp. 277–80
BP 21, pp. 219–54	‘The XVII Century’ amd ‘The XVIII Century’: [Workdiary 38]	1689–1691	Further assorted experimental accounts and observations, ascribed to various dates between 5 June 1686 and August 1691. ‘The XVIII Century’ comprises entries 1–30 only. Hands: Greg, Smith, C, uncertain	English	Workdiary 38

Ref.	Title	Date	Description	Language	Related material
BP 21, pp. 255–312	[Workdiary 36]	1685–1691	Miscellaneous accounts of conversations with informants, reports on phenomena, etc., some ascribed to various dates between 9 January 1685 and 23 February 1691 Hands: Greg, C, uncertain	English	Workdiary 36 The following entries were used in books by Boyle: 6–1 (p. 255), <i>General History of Air, Works</i> , vol. 12, pp. 108–9 36–19 (p. 265), <i>Laquid Motion, Works</i> , vol. 10, p. 295 36–25a (pp. 269–71), <i>Exp. &amp; Obs. Physicae, Works</i> , vol. 11, pp. 398–400 36–27 to 33 (pp. 271–3), <i>General History of Air, Works</i> , vol. 12, pp. 102–3 36–47, 48 (pp. 280–1), <i>General History of Air, Works</i> , vol. 12, pp. 105–6, 148 36–54 (p. 282), <i>General History of Air, Works</i> , vol. 12, p.106 36–58, 78, 83, 85, 86 (pp. 285, 291–2, 294, 295–7), <i>Exp. &amp; Obs Physicae, Works</i> , vol. 11, pp. 415–16, 412, 415, 434–5, 437 36–111 (p. 309), <i>General History of Air, Works</i> , vol. 12, pp.102–3
BP 21, pp. 313–82	‘Eroffneter Kasten der aller grosten Geheymnuss der Natur’	c. 1690	Apparently a transcript of Johann Grassholt, <i>Aperta Arca Artificiosissimi oder dess grossen und der allergroesten und kuenstlichsten Geheimnussen Kleinen Bauers Eroeffneter und offenstebender Kasten der Natur</i> (1687) Hand: scribal copy	German	Johann Grassholt, <i>Aperta Arca Artificiosissimi</i> (Hanau, 1687)
BP 21, pp. 383–562	‘Mechanica’	Late 17th century	Latin treatise on mechanics - definitions and propositions. Various scribal hands	Latin	

Volume 22

Folio-size volume; paginated; 622 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 22, pp. 1–56	‘Philosophicall Entryes & Memorials (of all sorts)’: [Workdiary 19]	1662 – 1665	Various experiments, notes, observations, and reports of occurrences from acquaintances; some dated to months of unknown year(s), and some to May 1664 (p. 39), June and July 1664 (p. 42), September 1664 (p. 41) and July 1665 (p. 44) Hands: F, E, H with endorsements by Boyle	English	Workdiary 19 The following entries were used in books by Boyle: 19–20a (p. 11), <i>Ex p. c̃s Obs Physicae</i> , <i>Works</i> , vol. 11, pp. 383–4 19–22 (p. 11b), <i>Usefulness, II, sect. 2</i> , <i>Works</i> , vol. 6, p. 497 19–26a (p. 13), <i>Saltiness of the Sea</i> , <i>Works</i> , vol. 7, pp. 439–41 19–56 (pp. 26–7), <i>Usefulness, II, sect. 1</i> , <i>Works</i> , vol. 3, pp. 318–19 19–70 (p. 35), <i>Spring, 1st Continuation</i> , <i>Works</i> , vol. 6, p. 170 19–96 (p. 44), <i>Producibleness, Works</i> , vol. 9, p. 68 19–106 (pp. 49–50), <i>Flame and Air</i> , <i>Works</i> , vol. 7, p. 134
BP 22, p. 57	Cover sheet: ‘A Physiologicall Note booke or Pandectae Physicae. Begun the 1 of January 166’ [sic: last digit omitted]	1660s	Hand: uncertain	English	
BP 22, p. 60	‘The Order of My Several Treatises’	c. 1665	P. 59 blank	English	See <i>Works</i> , vol. 14, pp. xl–xli, 331–2 Cf. BP 8, fol. 64v; BP 35, fol. 189; and BP 36, fols. 74, 91 and 114



Ref.	Title	Date	Description	Language	Related material
BP 22, pp. 61–73 24]	‘Physiologicall Notes, Begun the 25th of January’ [Workdiary	Late 1660s Hand: H	Accounts of phenomena related to Boyle by travellers and virtuosi. Heading in pencil.	English  72)	Workdiary 24 Entries 24–1, 3, 5, 8 (pp. 61–2, 65–6, published in ‘Strange Reports’, <i>Works</i> , vol. 11, pp. 431–4
BP 22, pp. 75–97	Unpublished Latin translation of ‘Hydrostatical Letter’ ( <i>Flame and Air</i> )	? 1680s	Hand: Ramsay	Latin	<i>Works</i> , vol. 7, pp. 185–95
BP 22, pp. 99–165	Unpublished Latin translations of ‘Positive or Relative Levity of Bodies under Water’, ‘Pressure of the Air’s Spring on Bodies under Water’, and ‘Differing Pressure of Heavy Solids’ ( <i>Flame and Air</i> )	? 1680s	Pages out of order in third treatise (pp. 131–65) Hand: Ramsay	Latin	<i>Works</i> , vol. 7, pp. 197–225
BP 22, pp. 167–96	Unpublished Latin translation of ‘Difficulty of Preserving Flame without Air’ ( <i>Flame and Air</i> )	? 1680s	Hand: Ramsay	Latin	<i>Works</i> , vol. 7, pp. 95–105
BP 22, pp. 197– 200	‘Enquirys and Experiments about Electricall Bodys’	1660s	Incomplete Hand: F	English	Published in M.B. Hall, <i>Robert Boyle on Natural Philosophy: An Essay with Selections from his Writings</i> (Bloomington, 1965), pp. 252–5, and in Hunter, <i>Heads &amp; Inquiries</i> , pp. 12–15 See also BP 38, fol. 120
BP 22, pp. 201–44	‘Notes upon the ... Section about Occult Qualities’	1660s	Pp. 245–6 is a cover sheet with endorsements only Hands: E, uncertain	English	Published in M.B. Hall, ‘Boyle’s Method of Work: Promoting his Corpuscular Philosophy’, <i>NRRS</i> , 41 (1987), 111–43, on pp. 124–41

Ref.	Title	Date	Description	Language	Related material
BP 22, pp. 247–558	Unpublished Latin translation of <i>Occasional Reflections</i>	Late 17th century	Complete except for dedicatory letter and preface Hand: uncertain	Latin	<i>Works</i> , vol. 5, pp. 3–187
BP 22, pp. 559–619	Unpublished Latin translation of ‘Hydrostatical Discourse’ ( <i>Flame and Air</i> )	? 1680s	Continues text on BP 20, pp. 89–155. Pp. 620–2 blank. Hand: Ramsay	Latin	<i>Works</i> , vol. 7, pp. 139–84

Volume 23  
Folio-size volume; paginated; 590 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 23, pp. 1–217	Unpublished Latin translation of <i>Examen</i>	? 1680s	Complete Hand: Ramsay	Latin	<i>Works</i> , vol. 3, pp. 109–88
BP 23, pp. 219–305	Unpublished Latin translation of part of <i>Producibleness</i>	? 1680s	Starting mid-sentence on p. 219 at end of part II (‘Of Spirits’), includes part III (‘Sulphur’) and part IV (‘Mercury’), up to section on ‘Doubts’ Hand: Ramsay	Latin	See <i>Works</i> , vol. 9, pp. 19–120 See also BP 21, pp. 1–86; BP 23, fols. 511–55
BP 23, pp. 307–476	Consilium Philosophicum vel potius Harmonia Philosophica; 1680s—Latin alchemical work with dedicatory letter from its author, E. Rothmaler, to Boyle	1670s	Endorsed by Boyle (p. 309) ‘Mr Rothmaler’s Booke that I had from himselfe by way of Gift as I understood it, which I bequeath to Mr. Newton the Mathematician of Cambridge’ [last phrase added in Warr’s hand]	Latin	
BP 23, pp. 477–510	‘Sub Tertio Articulo, comprehendendi possunt Sequentia Particularia’	? 1680s	Part of previously unpublished <i>Mechanical Origin of Light</i> Hand: Ramsay	Latin	Published in <i>Works</i> , vol. 14, pp. 38–54

Ref.	Title	Date	Description	Language	Related material
BP 23, pp. 511–55	Unpublished Latin translation of <i>Producibleness</i>	? 1680s	Text on p. 511 resumes from p. 305 with ‘Doubts’ and ends where BP 21, pp. 1–86, begins Hand: Ramsay	Latin	See <i>Works</i> , vol. 9, pp. 19–120 See also BP 21, pp. 1–86; BP 23, pp. 219–305
BP 23, pp. 557–90	‘About an Inch of Water’	1660s	Text concerning measurement of bulk of irregular solids in water and their experimental investigation Hands: F, E (p. 569), Slare (p. 571)	English	Published in <i>Works</i> , vol. 14, pp. 109–20

Volume 24  
Folio-size volume; paginated; 600 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 24, pp. 1–15	‘Thoughts and Observations about the Generation of Mineralls’	1660s	Hands: E, H P. 16 blank	English	Published in <i>Works</i> , vol. 13, pp. 363–69 See also BP 25, pp. 127–35; BP 27, pp. 297–314
BP 24, pp. 17–25	‘Articles of Inquiries Touching Mines’ ( <i>Phil. Trans.</i> , 1666)	1670s–1680s	Copy of text as published. P. 26 blank Hand: Bacon	English	<i>Works</i> , vol. 5, pp. 529–40 See also BP 38, fols. 1–5
BP 24, pp. 27–86	‘Divers Phenomena depend upon the superficial pores of Bodies’	1670s	Essay on pores of bodies Hand: Slare	English	Published in <i>Works</i> , vol. 14, pp. 89–107
BP 24, pp. 87–134	Unpublished Latin translation of ‘Heat and Cold’ ( <i>Mechanical Qualities</i> )	1675–1677	Lacking end of experiment XXVI and final two experiments in section II. Title page indicates that publication was planned for ‘Londini’ Hand: Oldenburg (to p. 107), uncertain	Latin	<i>Works</i> , vol. 8, pp. 329–61

Ref.	Title	Date	Description	Language	Related material
BP 24, pp. 135–50	Latin translation of ‘Essay II. That the Empire of man may be advanced by the skill of Physicists in chemical Matters’ an intended part of <i>Usefulness</i>	? 1680s	Hand: Ramsay	Latin	Published in <i>Works</i> , vol. 13, pp. 321–9
BP 24, pp. 151–68	Unpublished Latin translation of ‘Tastes’ ( <i>Mechanical Qualities</i> )	1675–1677	Title page indicates that publication was planned for ‘Londini’ Hand: Oldenburg	Latin	<i>Works</i> , vol. 8, pp. 363–75
BP 24, pp. 169–84	Unpublished Latin translation of ‘Odours’ ( <i>Mechanical Qualities</i> )	1675–1677	Hand: Oldenburg	Latin	<i>Works</i> , vol. 8, pp. 377–87
BP 24, pp. 185–222	Unpublished Latin translation of ‘Imperfection of the Chymist’s Doctrine of Qualities’ ( <i>Mechanical Qualities</i> )	1675–1677	Hand: Oldenburg	Latin	<i>Works</i> , vol. 8, pp. 389–405
BP 24, pp. 223–306	Commentary on Descartes’ <i>Principles of Philosophy</i> , parts 2–4	Late 17th century	Hand: two unknown hands (changing at p. 285)	Latin	
BP 24, pp. 307–36	Excerpts from Mathesius’ <i>Sarepta</i> (1562)	Late 17th century	Hand: unknown	German	See Johann Mathesius, <i>Sarepta</i> (1562); the book is excerpted only up to the tenth ‘Predig’
BP 24, pp. 337–46	Mineralogical excerpts from unidentified French source	Late 17th century	Mineralogical excerpts from unidentified French source Hand: unknown	French	



Ref.	Title	Date	Description	Language	Related material
BP 24, pp. 347–54	‘Varia’: mineralogical excerpts from various books	Late 17th century	Hand: unknown	Latin, English	The works excerpted include Conrad Gesner, <i>De omni rerum fossilium genere</i> (1566)
BP 24, pp. 355–7	Excerpts from Arab books concerning ‘nushâdir’ petrification and amber	1670s–1680s	Hand: Thomas Hyde	English	This is the enclosure referred to in Hyde to Boyle, 14 February 1667, <i>Correspondence</i> , vol. 3, pp. 298–9
BP 24, pp. 358–74	Excerpts from books and other papers on mineralogical matters, including observations from Mathesius’ <i>Sarepta</i> and ‘Une observation tiree de la Relation de la Terre ferme de l’Amerique par Pelleprat’ (p. 373)	1660s–1670s	Hands: F, Clodius (p. 361), ? Oldenburg (pp. 367f.)	Latin, English, French	See Mathesius, <i>Sarepta</i> (1562; the source here is the Nuremberg, 1571, edn), and Pierre Pelleprat, <i>Relation des missions des PP. de la Compagnie de Iesus dans les Iles, &amp; dans la terre ferme de l’Amerique Meridionale</i> (Paris, 1655), pp. 7–8
BP 24, pp. 375–85	Material relating to <i>Usefulness</i>	1680s	Introduction and start of ‘The I Section’. P. 386 blank Hand: Bacon, addns by Greg	English	Published in <i>Works</i> , vol. 13, pp. 350–3 Copy of BP 28, pp. 293–6. For a Latin translation, see BP 24, pp. 387–97
BP 24, pp. 387–97	Latin translation of unpublished ‘Essay XIII’ of <i>Usefulness</i>	? 1680s	Hand: Ramsay P. 398 blank	Latin	Published in <i>Works</i> , vol. 13, pp. 350–3 See BP 24, pp. 375–85
BP 24, pp. 399–418	‘Tertius modus, producendi Analytice Corpore novae Denominationis’, unpublished essay related to <i>Usefulness</i>	? 1680s	Hand: Ramsay	Latin	Published in <i>Works</i> , vol. 13, pp. 330–41

Ref.	Title	Date	Description	Language	Related material
BP 24, pp. 419–558	Unpublished Latin translation of most of <i>Final Causes</i>	Late 1680s	Missing only the end of section III and the first two propositions in section IV. Pp 556–8 blank except for endorsement Hand: Ramsay	Latin	<i>Works</i> , vol. 11, pp. 79–151 For the rest, see BP 16, fols. 86–107
BP 24, pp. 559–600	Unpublished Latin translation of part I, sections I–III of <i>Producibleness</i>	? 1680s	Hand: Ramsay P. 600 blank	Latin	See <i>Works</i> , vol. 9, pp. 19–47

Volume 25

Folio-size volume; paginated; 444 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 25, pp. 1–18	Remarks about natural history in the form of a letter to Henry Oldenburg.	13 June 1666	P. 18 is blank Hand: Bacon	English	<i>Correspondence</i> , vol. 3, pp. 170–5; <i>Oldenburg</i> , vol. 3, pp.160–6
BP 25, pp. 19–34	Unpublished Latin translation of ‘Differing Pressure of Heavy Solids and Fluids’ ( <i>Flame and Air</i> )	1670s–1680s	Hand: unknown	Latin	<i>Works</i> , vol. 7, pp. 213–25
BP 25, pp. 35–42	Unpublished Latin translation of ‘Positive or Relative Levity of Bodies under Water’ ( <i>Flame and Air</i> )	1670s–1680s	P. 42 is blank Hand: unknown	Latin	<i>Works</i> , vol. 7, pp. 197–203
BP 25, pp. 43–50	Unpublished Latin translation of ‘Pressure of the Air’s Spring on Bodies under Water’ ( <i>Flame and Air</i> )	1670s–1680s	Hand: unknown	Latin	<i>Works</i> , vol. 7, pp. 205–11

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 25, pp. 51–70	‘Chimical Notes Continued from December’: [Workdiary 34]	Early 1680s	Chymical recipes, many in code, with significant alterations in an unknown hand. Various entries dated in margin by day and month. First few pages severely burned, possibly by acid Hands: Slare, Warr, unidentified, Boyle	English	Workdiary 34. See plate 7
BP 25, pp. 71–4	‘A Continuation of C[hymical] Notes Sept. the 29th’ [Workdiary 23, part 1]	Late 1660s	Chymical recipes, with additional notes and significant alterations by Boyle, with marginal dates including ‘Feb the 9th’ (p. 73) Hands: E, R	English	Workdiary 23, part 1
BP 25, pp. 75–86	‘Chimical Memorandums continued from January 25’ [Workdiary 35]	Early 1680s	Chymical recipes, many in code and with alterations in an unknown hand, with marginal date ‘March 1’ on p. 77. P. 86 is blank Hands: Slare, Warr, uncertain	English	Workdiary 35
BP 25, pp. 87–94	[Workdiary 23, part 2]	Late 1660s	Chymical recipes, with additional notes and significant alterations by Boyle, with marginal dates including ‘Febr. 21’ (p. 92) Hands: E, Boyle	English	Workdiary 23, part 2
BP 25, pp. 95–111	Latin translation of part of <i>Exp. &amp; Obs. Physicae</i>	1680s	Chapter 1, missing only the final paragraph of experiment XV. Misbound: p. 101 should follow p. 111 Hand: M	Latin	<i>Works</i> , vol. 11, pp. 377–84
BP 25, pp. 113–22	Latin passages relating to ‘Strange Reports’ ( <i>Exp. &amp; Obs. Physicae</i> ) comprising dated observations and introductory remarks	1680s	Dates include 15 February 1689 (p. 113), 25 May 1685 (p. 121) Hand: M	Latin	Published in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 230–1, 245–50

Ref.	Title	Date	Description	Language	Related material
BP 25, pp. 123–5	Fragment of unpublished Latin translation of <i>Christ. Virt., I</i>	c. 1690	Proposition I, final five and a half paragraphs; also proposition II, first two and a half paragraphs Hand: M	Latin	<i>Works</i> , vol. 11, pp. 310–13 Text on p. 123 follows text on BP 28, p. 173
BP 25, pp. 127–35	Part of ‘Thoughts and Observations about the Generation of Mineralls’	1660s	Hand: H	English	Published in <i>Works</i> , vol. 13, pp. 369–71 See also BP 24, pp. 1–15; BP 27, pp. 297–314
BP 25, pp. 137–44	‘De Motu Corporum ex mutuo impulsu Hypothesis’	1669	Latin essay on motion by Huygens Hand: unknown	Latin	Cf. BP 20, pp. 159–65
BP 25, pp. 145–52	‘Archimedes Equations of a Sphaere, and Cylinder, their Surfaces & Solids’, with a cover-note (p. 145) in the form of a letter from Robert Wood to George Tallet	31 July 1676	Hand: unknown Pp. 151–2 blank except for endorsement	English	
BP 25, pp. 153–6	‘Promiscuous Observations begun the 24th of September 1655’ [Workdiary 13, part 1]	1655	Recipes, mostly from Sir Kenelm Digby, with marginal dates ranging from ‘September 24th’ to ‘Octob. 3’ Hand: Boyle	English	Workdiary 13, part 1
BP 25, pp. 157–60	‘A Private Philosophical Diary’ [Workdiary 14]	1656	An assortment of recipes, with marginal dates ranging from ‘January 3’ to ‘February the 8th’ Hand: P	English	Workdiary 14
BP 25, pp. 161–4	‘My Private Philosophicall Diary Begun this First of Jan. 1656/7’ [Workdiary 16]	1656–1657	Recipes, with marginal dates ranging from ‘Jan. 1’ to ‘Jan 8th’ Hand: P	English	Workdiary 16



Ref.	Title	Date	Description	Language	Related material
BP 25, pp. 165–72, Philosophicall Collections 173–6	‘began the 12th of September 1656’ [Workdiary 15, part 1]	1656	Recipes, with dates ranging from ‘September 12th’ to ‘May 12th’ [1657] Misbound: fols. 173–6 should precede fols. 165–72 Hands: P, ?1650s	English	Workdiary 15, part 1 See also BP 26, fols. 96–9
BP 25, pp. 177–83 (4 leaves)	‘Promiscuous Observations begun the 24th of September 1655’ [Workdiary 13, part 2]	1655	Recipes, mostly from Sir Kenelm Digby, with marginal dates ranging from ‘Octob. 4’ to ‘December 6th’ Hand: P	English	Workdiary 13, part 2
BP 25, pp. 185–215	Latin translation of list of heads and opening section of ‘Dialogue on the Generation and Transmutation of Metals’	1680s	Hand: Ramsay	Latin	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 236–55 List of heads also in BP 25, p. 305, and MS 198, fols. 144v–5
BP 25, pp. 217–24	Introductory material to <i>Paralipomena</i>	1670s–1680s	Including ‘Preface’, etc. Hand: Bacon	English	Published and discussed in chapter 4. Pp. 222–3 quoted in Rose-Mary Sargent, <i>The Diffident Naturalist</i> (Chicago, 1995), pp. 140–2
BP 25, pp. 225–54	‘Memoirs & Paralipomena the 2 <sup>d</sup> Tome’	Mid–late 1670s	Notes of experiments, reports from travellers, extracts from books, etc.; title-page, ‘Memoirs for Divers parts of Naturall History Treated of by Mr. Boyle ... The [blank] Section’ (p. 253). Including recopied extracts from Workdiary 21 on pp. 241–3 (endorsed ‘Particulars belonging to the Origin of Gems’ [pencil title, erased]), together with: ‘A Description of the Trew Thermometer’ (pp. 245–8, endorsed ‘Mr. Wicks’ [?])	English, Latin	Mostly published in chapter 4, appendix Copy of pp. 245–8 in BP 9, fols. 81–2

Ref.	Title	Date	Description	Language	Related material
BP 25, pp. 255–61	Two copies of Latin notes on metals	1670s–1680s	Description of his Weather Glasse’. Two dates in September 1678 appear on p. 225. Fol. 254 blank	Latin	
			Hands: Bacon, Greg, Slare, Smith, Boyle, unknown		
			Hand: Bacon		
BP 25, pp. 262–72	List of topics concerning natural history of water, list of proposed experiments and extracts from French geographical books	1670s – 1680s	Pp. 262–3 and 266 blank	English, French	For pp. 264–5, see Hunter, <i>Heads &amp; Inquiries</i> , pp. xii, 17–19
			Hands: Bacon, Warr, Slare		
BP 25, pp. 273–82	Information recorded from the Imperial ambassador and members of his entourage concerning the transmutation of gold performed by J.W. Seiler, one with the date ‘June 26’ in margin, with further extract added from letter from St George Ashe to the Royal Society, July 1691	1678, 1691	Hand: Bacon	English	Pp. 273–9 published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 296–300
BP 25, pp. 283–308	Material relating to the ‘Dialogue on the Generation and Transmutation of Metals’, part one (pp. 287–303), including list of heads (p. 305), etc.	c. 1680	Hand: Bacon	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 237, 257–60, 261–2, 299–300, 304–5 See also BP 25, pp. 277–9; MS 198, fols. 144v–5

Ref.	Title	Date	Description	Language	Related material
BP 25, pp. 309–14	Miscellaneous notes and recipes.1670s–1680s		Including material on a menstruum, perhaps for the treatise on transmutation (p. 309); a note on ‘the strange, and incredible vertue of some Herbes’ (p. 311), and a herbal experiment involving creation of philosopher’s stone, dated as translated from French in 1627 (p. 313). P. 314 is blank Hand: Bacon	English	
BP 25, pp. 315–20	Prefatory material to a paper on the use of alchemical processes (pp. 315–17) and definition of spirit (p. 319)	1670s–1680s	Hand: Bacon	English	
BP 25, pp. 321–6	Manuscript version of ‘Strangely Self-moving Liquor’ ( <i>Phil. Trans.</i> 1685)	? 1680s	With appended ‘Account of making a moving Liquor as followeth’ (p. 325) which was not published in <i>Phil. Trans.</i> Endorsed by Wotton Hand: Bacon	English	<i>Works</i> , vol. 9, pp. 449–52. Unpublished section (p. 325) published in <i>Works</i> , vol. 9, pp. xli–xlii
BP 25, pp. 327–8	Notes on experiment with aqua fortis and quicksilver	1670s–1680s	Hand: Bacon	English	
BP 25, pp. 329–36	Perfume recipes ‘out of Mr. Evelyns Booke of Receipts &c’	Late 1650s	Pp. 333–6 blank except for endorsement on p. 336. Hand: John Evelyn	English	
BP 25, pp. 337–40	Letter from ‘George, Patriarch of Antioch’ to Boyle	25 July 1677 NS: i.e. 15 July OS	Pp. 338–40 blank except endorsement on p. 340	French	Published in <i>Correspondence</i> , vol. 4, pp. 445–7
BP 25, pp. 341–2	[Workdiary 7]	1651	Latin and English recipes, including ‘Dr. Boat’s Receipt for the Stone’ Hand: early Boyle	English, Latin	Workdiary 7

Ref.	Title	Date	Description	Language	Related material
BP 25, pp. 343–6	‘Memorialls Philosophicall. Beginning this First day of the Yeare 1651/52’ [Workdiary 8]	1652–1654	Medicinal recipes. Later date in title header suggests the workdiary could have been continued in 1654 Hand: early Boyle	English, Latin	Workdiary 8
BP 25, pp. 347–58	[Workdiary 9]	Early 1650s	Further medical and chymical recipes Hand: early Boyle	English, Latin	Workdiary 9
BP 25, pp. 359–62	[Workdiary 10]	Early 1650s	‘Pomata, Comitissae de Trivier’(?): collection of Latin medicinal recipes from Digby, Mayerne and others. Hand: early Boyle	Latin, French	Workdiary 10
BP 25, pp. 363–5	Notes on lodestones	Late 17th century	Hand: unknown	English	
BP 25, pp. 367–85	Recipes for scented tobacco, toothpaste, invisible ink, etc.	Late 17th century	Incomplete Hand: uncertain	French	
BP 25, pp. 387–90	‘Certain observations Concerning the shining [sic] of Sea Water’	Late 17th century	Second leaf repaired at bottom Hand: unknown	French	
BP 25, pp. 391–4	List of ‘Observations to be made’ and ‘Tryalls to be made’ concerning shining Wood’	1660s	Relates to experiments in ‘Relation between Light and Air’ ( <i>Phil. Trans.</i> , 1670). Pp. 391 and 394 blank Hands: E, F	English	See <i>Works</i> , vol. 6, pp. 3–25. Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 16–17
BP 25, pp. 395–410	Sections of text concerning shining substances and sea salt	1670s–1680s	Pp. 408–10 blank. Some pasted-up Hands: Bacon, Greg	English	
BP 25, pp. 411–17	Fragment of Boyle’s ‘Essay on Spontaneous Generation’	Late 1650s	Hand: 1650s	English	Published in <i>Works</i> , vol. 13, pp. 275–7



Ref.	Title	Date	Description	Language	Related material
BP 25, pp. 419–21	Further account of Seiler’s transmutation	c. 1680	Part of ‘Dialogue on Transmutation’ Hand: Bacon	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 262–4 Cf. BP 25, pp. 273–82
BP 25, pp. 423–6	‘A Conjecture at the Causes of the reall Virtues of Gems & medicinall stones’	1660s	MS text overlapping with the introduction to section I of <i>Gems</i> , first part published in paragraphs 4–6, the rest discarded Hand: E, corr. by Boyle	English	Published in <i>Works</i> , vol. 7, pp. xiv–xv; overlapping with <i>ibid.</i> , pp. 12–13 For later version, see BP 38, fols. 123–4
BP 25, pp. 427–32	‘Doctor Wallis’s Account of Dr. Goddards Experiment made at Gresham-Colledge, about weighing of Glas[s]-canes with the Cylinders of quicksilver, standing in them, according to the Torricellean Experiment’	1662	Cf. Birch, <i>Royal Society</i> , vol. 1, p. 106 Hand: uncertain	English	See John Willis, <i>Mechanica</i> (London, 1670–1), part 3
BP 25, pp. 433–6	‘Praeparatio Salis marini &c’: account of experiments with salt, etc.	Late 17th century	Also contains directions in English on how to set up a mercurial furnace Hand: unknown	Latin, English	
BP 25, pp. 437–42	Diagrams of ‘a Mercuriall Furnace’	Late 17th century	P. 439 blank, pp. 440, 442, endorsements only Hand: unknown	English	
BP 25, p. 443	Brief note on generation and transmutation of stones	1660s	Hand: H	English	Related to the material on petrification published in <i>Works</i> , vol. 13

Volume 26

Folio-size volume; foliated; 226 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 26, fols. 1–2	‘A Philosophicall Diary begun Sept. the 20th’ [Workdiary 17]	Late 1650s	Collection of recipes with marginal dates ranging from ‘Sep. 20th’ to ‘Oct 24’ Hand: uncertain	English	Workdiary 17
BP 26, fol. 3	‘Distinguish’d Experiments Or more Private Observations Continu’d from 7ber the 29th 1688/9’ [Workdiary 39]	1689	Experimental accounts and observations Hands: Bacon, C	English	Workdiary 39
BP 26, fols. 4–5	Fragment of an experiment on heating chemicals <i>in vacuo</i>	1650s	Similar to trials described in the final paragraph of experiment XXXIX of <i>Spring of the Air</i> Hand: 1650s	English	<i>Works</i> , vol. 1, p. 273
BP 26, fols. 6–12	Miscellaneous papers, including observations and fragments of text	Late 17th century	Includes description of pumping engine at ‘Relistan Tyn Mine in the parish of Gwinnier in the County of Cornwall’ (fol. 8) Various hands	English	
BP 26, fols. 13–25	‘Preliminar[y] Relation of the Mines in Scotland in Generall’	Late 17th century	Hand: unknown	English	
BP 26, fols. 26–8	MS version of preface to <i>General History of Air</i>	c. 1680 or later	Very similar to published version, but lacking final paragraph. Fols. 26–7 are identical with BP 9, fols. 76–7. For an earlier version, see BP 26, fols. 222–3. Fol. 28 is a copy of MS 189, fol. 148v Hand: Bacon	English	<i>Works</i> , vol. 12, pp. xiiin, 9–10 See also BP 9, fols. 76–7; BP 10, fol. 169; BP 26, fols. 222–3; MS 189, fol. 148v

Ref.	Title	Date	Description	Language	Related material
BP 26, fol. 29	List of titles for <i>General History of Air</i>	1670s–1680s	Virtually as published, but with ‘Of the moisture & dryness of the Air’ between 9 and 10, lacking nos. 41, 42, 47, and 48, and with 46 before 43–5 Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 7–8
BP 26, fol. 30	Superseded version of preface to ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	Mid-1680s	Showing several changes prior to publication. Altered copy of MS 198, fols. 66–7, with some readings that do not appear there and vice versa Hand: Bacon, corr. by Boyle	English	<i>Works</i> , vol. 10, pp. 305–6 See also MS 198, fols. 66–7
BP 26, fol. 31	List of titles for <i>General History of Air</i>	c. 1680 or later	‘Catalogue des Titres ou Chapitres de l’Histoire de l’Air’, list of titles in French; as in BP 26, fol. 45 Hand: Bacon	French	<i>Works</i> , vol. 12, pp. 7–8
BP 26, fol. 32	‘A Small Stone of the Kinde called by some Authors Oculus Mundi, being dry & clowdy weighed’: table of weights of the stone when dry, wet, etc.; and experiment on it	Late 17th century	(?Holograph)	English	
BP 26, fols. 33–6	‘Promiscuous Collections out of Parrac his fourth Tome’: numbered observations on chemical matters	1670s–1680s	Hand: Bacon	English	Discussed in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), p. 144
BP 26, fols. 37–44	Further chemical notes and memoranda	1670s–1680s	Hand: Bacon	English, French	Discussed in L. Principe, ‘The Alchemies of Robert Boyle and Isaac Newton’, in M.J. Osler (ed.), <i>Rethinking the Scientific Revolution</i> (Cambridge, 2000), pp. 201–20, on pp. 206–7

Ref.	Title	Date	Description	Language	Related material
BP 26, fol. 45v	‘The Titles of the (Naturall and c. 1680 Experimental) History of the or later Air’		Hand: Bacon	English	Published in <i>Works</i> , vol. 12, pp. xxiii–xxiv See also BP 10, fol. 37
BP 26, fol. 46	List of titles for <i>Human Blood</i>	1680s	Hand: Bacon	English	Copy of BP 18, fols. 45v–6. Hunter & Knight, <i>Human Blood</i> , pp. xiii, 28–31
BP 26, fols. 47–8	Copy of published text of ‘General Heads for the Natural History of a Country’	1670s– 1680s	Missing final paragraph Hand: Bacon	English	<i>Works</i> , vol. 5, pp. 508–11 For another copy, see BP 35, fols. 179–80
BP 26, fols. 49–52	Titles for natural histories of water and sea	1670s– 1680s	Hand: Bacon	English	Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 17–23 See also BP 25, fols. 264–5
BP 26, fol. 53	MS version of title III, experiment III, of ‘Respiration’ ( <i>Phil. Trans.</i> , 1670)	1670s– 1680s	Presumably intended for reuse in another context Hand: Bacon	English	<i>Works</i> , vol. 6, p. 220 Copy of BP 18, fol. 128v
BP 26, fols. 54–63	Miscellaneous accounts of experiments and sections of text	1670s– 1680s	Including paragraph on the Cartesian hypothesis of heat, perhaps intended for unpublished <i>Mechanical Origin of Flame</i> (fol. 63) Hands: Bacon, N (fol. 61)	English, French	Fol. 62 published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 23–4 See also BP 26, fol. 70; BP 36, fols. 98–9
BP 26, fols. 64–5	‘Chap: XII’, dealing with solution of simultaneous linear equations	1670s– 1680s	Hand: Bacon	English	
BP 26, fols. 66–7	Extracts from workdiaries	1670s– 1680s	Hand: Bacon	English	See above, p. 173



Ref.	Title	Date	Description	Language	Related material
BP 26, fols. 68–74	Miscellaneous sections of text, dealing with fire, light, heat and smoke (fols. 68–71, 74), and hydrostatic phenomena (fols. 72–3)	1670s–1680s	Fols. 68, 69 and 71 probably for <i>Mechanical Origin of Flame</i> Hands: Bacon, Warr, Slare	English	Fol. 68 is a copy of MS 189, fols. 10–11. For fo. 70, see also BP 26, fol. 62; BP 36, fols. 98–9, Hunter, <i>Heads &amp; Inquiries</i> , pp. xii, 23–4
BP 26, fols. 75–6	‘Enquirys about Lime’	1660s	Hand: F	English	Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 24–6
BP 26, fol. 77	Unknown correspondent to Boyle	8 April 1686	Copy of letter Hand: Bacon	English	Published in <i>Correspondence</i> , vol. 6, pp. 176–7
BP 26, fols. 78–89	Extracts from workdiaries and pasted-down sections of text, recipes and memoranda	1670s–mid 18th century	Some pasted down, some numbered, one dated 22 May 1664 (fol. 88). Between fols. 83 and 84 is a slip containing memoranda by Miles Fol. 85b is a copy of part of a letter from Wallis to Boyle of 20 May 1685 Fol. 88b (copy of BP 27, p. 6a) is as MS version of title 9, paragraph 1 of <i>General History of Air</i> Hands: Bacon, C, Miles, ?	English, French	See above, pp. 169–70 For fol. 85b, see <i>Correspondence</i> , vol. 6, pp. 121–2 For fol. 88b, see <i>Works</i> , vol. 12, p. 29
BP 26, fol. 90	‘Enquirys and Tryalls about Insects & Sponteartha’	1660s	Hand: F	English	Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 26–7
BP 26, fols. 91–5	‘De Centro Gravitatis’ and ‘De Libra’.	1660s	Hand: E	Latin	
BP 26, fols. 96–9	[Workdiary 15, part 2]	1656	Recipes, with dates ranging from ‘May 13th’ to ‘June 8th 57 Oxo.’ Hands: P, ?1650s	English	Workdiary 15, part 2 See also BP 25, pp. 165–76

Ref.	Title	Date	Description	Language	Related material
BP 26, fols. 100–5	Miscellaneous recipes, etc.	Late 17th century	Fol. 102 endorsed '[Mercury] Antimonii Lockii'. Hands: Bacon, ?, Brownover (fol. 102)	Latin, English	
BP 26, fols. 105–8	Miscellaneous sections of text, including MS version of experiment XX, second trial, of <i>Spring</i> , 1st Continuation (fol. 106)	1670s–1680s	Fol. 106 is a copy of BP 18, fol. 128. It was presumably intended for reuse in another context Hand: Bacon	English	For fol. 106, see <i>Works</i> , vol. 6, p. 87
BP 26, fols. 109–14	Account of van Leeuwenhoek's 1670s–microscopical observations and 1680s of mechanical apparatus		Author unidentified. Includes diagrams Hand: unknown	French	
BP 26, fol. 115	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	1670s–1680s	Chapter II, point IV, second paragraph, including detail omitted in published version. Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 386–7
BP 26, fol. 116	Copy of part of letter from Francis Jessop to Francis Aston	19 Oct. 1685	Hand: Bacon	English	See <i>Correspondence</i> , vol. 6, pp. 449–50
BP 26, fols. 117–18	L'arte maestra d'Agricoltura in segna a moltiplicare il raccolto delle semenze'	1660s–1670s	Italian essay Hand: N	Italian	
BP 26, fols. 119–24	MS version of parts of <i>Spring</i> , 1st Continuation	1660s	(1) Experiment XLIII, missing the footnote about figure 41; (2) experiment XXXVI, complete; (3) experiment XXVI, complete Hand: J	English	(1) <i>Works</i> , vol. 6, pp. 146–7 (2) <i>Works</i> , vol. 6, pp. 125–6 (3) <i>Works</i> , vol. 6, pp. 104–5
BP 26, fol. 125	Fragment of unpublished Latin translation by Henry Oldenburg of <i>Spring</i> , 1st Continuation	1669–1677	Experiment I, up to and including point III Hand: Oldenburg	Latin	<i>Works</i> , vol. 6, pp. 41–4

Ref.	Title	Date	Description	Language	Related material
BP 26, fol. 126	Account of phenomenon in letter by ‘Mr J.M.’ to ‘T.H.’	24 April 1684	Copy Hand: Unknown	English	
BP 26, fols. 127–8	‘To prepare a balance to measure the bulk of bodyes by the help of water’	1660s	Hand: F, corrected by E	English	
BP 26, fol. 129	Fragment of Boyle’s ‘Essay on Spontaneous Generation’	1650s	Hand: 1650s	English	Published in <i>Works</i> , vol. 13, pp. 282–3
BP 26, fols. 130–2	MS version of part of <i>Usefulness</i> , 1660s <i>II, sect. 2</i>	1660s	Four paragraphs in section I of Essay X Hand: F	English	<i>Works</i> , vol. 6, pp. 516–18
BP 26, fols. 133–4	Unpublished Latin translation of part of <i>Exp. &amp; Obs. Physicae</i>	c. 1690?	Copy of two pages (‘3’ and ‘4’) from translation of chapter II Hand: Ramsay	Latin	<i>Works</i> , vol. 11, pp. 385–90
BP 26, fols. 135–6	Superseded version of part of ‘History of Fluidity’ ( <i>Certain Physiological Essays</i> )	1650s or early 1660s	Section 18; on experiments with powdered alabaster Hand: 1650s	English	Published in <i>Works</i> , vol. 2, pp. 133–5
BP 26, fols. 137–8	[Workdiary 30, part 2]	Early 1670s	Accounts of experiments, etc. Lower part of fol. 137 is pasted-in slip, a copy of entry 703 from Workdiary 21 Hand: Slare	English	Workdiary 30, part 2 See also BP 10, fol. 21
BP 26, fols. 139–42	Miscellaneous recipes, etc., including ‘The Vernish for Gilding Picture-Frames’ in hand of John Evelyn	1660s	Hand: Evelyn, G (fol. 142), ?	English	
BP 26, fols. 143–53	Unpublished Latin translation of part of <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Chapter II, complete. Numbered internally ‘1’ to ‘11’ Hand: Ramsay	Latin	<i>Works</i> , vol. 11, pp. 385–90

Ref.	Title	Date	Description	Language	Related material
BP 26, fols. 154–61	‘Sectio II’	? 1680s	Part of unpublished <i>Mechanical Production of Light</i> Hand: Ramsay	Latin	Published in <i>Works</i> , vol. 14, pp. 32–8
BP 26, fols. 162–75	‘Essay the [...] Of the Atomickall Philosophy’	c. 1654	The correct sequence of the leaves is fols. 162–3, 168–75, 166–7, 164–5 Hand: uncertain	English	Published in <i>Works</i> , vol. 13, pp. 225–35
BP 26, fols. 176–81	Latin list of Boyle’s works, 1661–87	? 1688	Similar to Jones’ Latin catalogue (1688). Misbound: correct order is 176, 181, 177, 180, 178 (179 is blank) Hand: M	Latin	<i>Works</i> , vol. 11, pp. 187–97
BP 26, fols. 182–9	French translation of chs. 1–2 of Basil Valentin’s <i>Tractatus Chymico-Philosophicus de Rebus Naturalibus et Supernaturalibus</i> and ‘Advis au Lecteur’	1660s–1670s	Hand: Oldenburg	French	Basil Valentine, <i>Tractatus Chymico-Philosophicus de Rebus Naturalibus et Supernaturalibus</i> (Frankfurt, 1676)
BP 26, fols. 190–2	Transcript of German treatise, ‘Bereitung des Stein Ignis’	1660s–1670s	Hand: Oldenburg	German	
BP 26, fols. 193–4	Synopses of parts of <i>Usefulness</i>	1660s	1. ‘Scheme of the 3d Essay’ (fol. 193r) 2. Notes for ‘The second Essay of the Usefulness, &c’ (fols. 193v–4) Hand: F, E	English	1. Published in <i>Works</i> , vol. 13, pp. lxviii–lxix 2. Published in <i>Works</i> , vol. 13, pp. lxvii–lxviii
BP 26, fols. 195–6	MS version of parts of <i>Icy Noctiluca</i>	c. 1680	Section IX, and section X, experiment I, missing the subheadings and a few words; otherwise as published Hand: A	English	<i>Works</i> , vol. 9, pp. 327–9
BP 26, fol. 197	MS version of part of <i>Spring, 1st Continuation</i>	1660s	Experiment XIII, complete Hand: J	English	<i>Works</i> , vol. 6, p. 68



Ref.	Title	Date	Description	Language	Related material
BP 26, fol. 198–9	MS version of part of <i>Porosity</i>	1670s	‘Porousness of Animal Bodies’, chapter IV, first part of paragraph 3 (rest added later), all of paragraph 4 and half of paragraph 5; text ends mid-sentence with catch-word, remainder lost Hand: Slare	English	<i>Works</i> , vol. 10, pp. 117–19 with gap
BP 26, fol. 200	(a) MS version of part of <i>Flame and Air</i> and (b) section of text on effluvia	c. 1670	Pasted-down sections of text (a) Headed ‘Experiment the —’: i.e., ‘New Experiments about the Relation between Air and the Flamma Vitalis of Animals’, experiment VI, paragraph 1, showing several changes in wording but final version identical with published text Hand: uncertain	English	(a) <i>Works</i> , vol. 7, pp. 122–3 (b) See <i>Works</i> , vol. 7
BP 26, fol. 201	MS version of part of <i>Things above Reason</i>	1670s	Final two sentences of Arnobius’ fourth speech in ‘Fifth Advice’. Follows text on middle of BP 9, fol. 221 Hand: Slare	English	<i>Works</i> , vol. 9, p. 416
BP 26, fol. 202–3	Reply to comments by a critic of <i>Spring of Air</i> , probably Francis Line	c. 1662	Note similarity with certain arguments in BP 29, fols. 147–50 Hand: uncertain	English	Published in <i>Works</i> , vol. 3, pp. xvi–xviii
BP 26, fol. 204	MS version of part of <i>Cold</i>	1650s or early 1660s	Opening paragraph, title I, as printed Hand: 1650s or D	English	<i>Works</i> , vol. 4, pp. 265–6
BP 26, fols. 205–6	‘New Experiments further elucidating The Nature of the Air Water & other Bodies’ submitted to Royal Society, in reply to Boyle’s pneumatic experiments, by ‘J.W. Gent.’	Late 17th century	17th Holograph.	English	

Ref.	Title	Date	Description	Language	Related material
BP 26, fol. 207	Unpublished experiment relating to <i>Spring, 1st Continuation</i>	1660s	‘Experiment the —. Wherein are propos’d some new wayes of producing aire’, probably once intended for this work. Hand: K	English	Published in <i>Works</i> , vol. 6, pp. xxvii Copy of BP 28, p. 395
BP 26, fols. 208–16	Miscellaneous descriptions and lists of experiments, recipes and sections of text, some pasted down; includes diagrams of retorts, furnace etc., experiment with white clay (fol. 210)	1650s–1680s	Various hands, including Boyle (fol. 208), ?D (fol. 210), E (fols. 211–12), Greg (fol. 215)	English	
BP 26, fol. 217	‘Experiments proposed to be made in Mr Boyles Pneumatick Engine’	1660s	Design for four experiments, probably intended for <i>Spring, 1st Continuation</i> , though none a perfect match with published experiments Hand: Wallis	English	See <i>Works</i> , vol. 6
BP 26, fols. 218–20	Latin paper giving formula for calculation and account of ‘Some of Dr Elzholtz’s curious and usefull Experiments’	1680s	Hand: Greg	Latin, English	
BP 26, fol. 221v	List of titles for <i>General History of Air</i>	1670s, c. 1680 or later	Two versions of a list of 12/13 titles; the second adds as no. 10 the title ‘Of the Healthiness and Insalubrity of the Aire’ Hand: Slare, A	English	See <i>Works</i> , vol. 12, pp. xii–xiii
BP 26, fols. 222–3	MS version of preface to <i>General History of Air</i>	Late 17th century	Paragraphs 1, 4 (alternative version), and first part of 5. Copied out (with additional material) in BP 9, fols. 76–7, and BP 26, fols. 26–7 Hand: ?	English	<i>Works</i> , vol. 12, pp. 9–10

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 26, fol. 224	Drawing of furnace	1660s	Hand: unknown	English	
BP 26, fol. 225	List of things to remember	1660s	Hand: K, addns by Boyle	English	See also BP 28, p. 405
BP 26, fol. 226	Details of costs of smelting silver in Cardiganshire	1660s	Hand: unknown	English	

Volume 27  
Folio-size volume; paginated; 468 pages. 19th-century contents leaf: Science.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 27, p. 1	‘A.A. The Outlandish Booke’		Vellum cover Hand: uncertain	English	
BP 27, pp. 2–3	Verse mnemonic of Boyle’s works based on ‘The Order of My Several Treatises’		Hands: Slare, ?	English	Published in <i>Works</i> , vol. 14, pp. 335–6
BP 27, pp. 5–159	‘Promiscuous Experiments, Observations, & Notes’ [Workdiary 21]	Late 1660s	(Pencil title). Notes on experiments, recipes, and reports on phenomena from travellers and virtuosi. Many have endorsements identifying their subject matter Hand: E, F, G, J, K, Q, R, Slare, Bacon and others	English	Workdiary 21. The following entries were used in books by Boyle: 21–201 (p. 6a), <i>General History of Air, Works</i> , vol. 12, p. 29 21–204 (pp. 6–7), <i>Cosmical Qualities and General History of Air, Works</i> , vol. 6, p. 304, and vol. 12, pp. 146–7 21–232 (p. 17), <i>Rarefaction, Works</i> , vol. 6, p. 383 21–233 (pp. 17–18), ‘Light and Air’ ( <i>Phil. Trans.</i> , 1670), <i>Works</i> , vol. 6, p. 19

Ref.	Title	Date	Description	Language	Related material
					21–270, 272 (pp. 23–4), <i>General History of Air, Works</i> , vol. 12, pp. 113–14
					21–299 (p. 30), <i>Cosmical Qualities, Works</i> , vol. 6, p. 324
					21–300 (p. 31), <i>Cosmical Qualities, Works</i> , vol. 6, p. 338
					21–304 (p. 33), <i>Mechanical Qualities, Works</i> , vol. 8, p. 385
					21–310 (p. 36), <i>Cosmical Qualities, Works</i> , vol. 6, p. 349
					21–317 (p. 39) <i>Mechanical Qualities, Works</i> , vol. 8, p. 386
					21–318, 319 (p. 40) <i>Saltness of the Sea, Works</i> , vol. 7, pp. 415–16
					21–320, 321 (pp. 40–1) <i>Cosmical Qualities, Works</i> , vol. 6, p. 349
					21–329 (p. 45) <i>Effluviiums, Works</i> , vol. 7, p. 235
					21–534 (pp. 91–2), <i>General History of Air, Works</i> , vol. 12, p. 111
					21–536 (p. 92) <i>General History of Air, Works</i> , vol. 12, pp. 42–3
					21–537 (p. 93a), <i>Colours, Works</i> , vol. 4, p. 87
					21–538 (p. 93b), <i>Cold, Works</i> , vol. 4, p. 569
					21–590 (p. 107) <i>Saltness of the Sea, Works</i> , vol. 7, p. 416
					21–627 (pp. 117–8) <i>Effluviiums, Works</i> , vol. 7, pp. 283–4
					21–631 (p. 119) <i>Exp. &amp; Obs. Physicae, Works</i> , vol. 11, p. 387



Ref.	Title	Date	Description	Language	Related material
BP 27, pp. 161–6	Index material, including index to Workdiary 21 and ‘An Index belonging to the flower pot booke’	Early 1650s	P. 161 has numbers presented in ruled grid annotated with notes on relevant entries; pp. 162–3, 166 blank; pp. 164–5 have series of letters (A–U) and numbers (1–32) in columns, but otherwise blank Hands: Boyle, Warr, Bacon, ?	English	21–635, 636, 637 (p. 121) <i>Cosmical Qualities</i> , <i>Works</i> , vol. 6, pp. 311–12
					21–645 (pp. 122–3) <i>Saltiness of the Sea</i> , <i>Works</i> , vol. 7, pp. 423–4
					21–646 (p. 123) <i>Cosmical Qualities</i> , <i>Works</i> , vol. 6, p. 363
					21–653 (p. 125) <i>Cosmical Qualities</i> , <i>Works</i> , vol. 6, p. 307
					21–675 (p. 132) <i>Cosmical Qualities</i> , <i>Works</i> , vol. 6, pp. 349–50
					21–675a (p. 133) <i>Cosmical Qualities</i> , <i>Works</i> , vol. 6, p. 363
					21–722 et seq (pp. 151–4) (see also
					21–523, p. 89) <i>Cosmical Qualities</i> , <i>Flame and Air</i> , <i>Works</i> , vol. 6, pp. 351–2, 357; vol. 7, pp. 173, 220
					See above, pp. 164, 182–3
BP 27, pp. 167–78	Superseded version of part of <i>Spring, 1st Continuation</i>	1660s	Experiments XLVII (perhaps) and XLVIII (probably). Text mostly on rectos, but paragraph added on p. 172 and, after p. 177, the text finishes on p. 176 Hand: J, addns by Boyle	English	Published in <i>Works</i> , vol. 6, pp. xxi–xxvi
					See also <i>ibid.</i> , pp. 151–7

Ref.	Title	Date	Description	Language	Related material
BP 27, pp. 179–96	[Workdiary 29, part 1]	Early 1670s	Accounts of experiments and observations, numbered 214–237. First page starts in mid-entry, suggesting that beginning of workdiary is missing. Marginal dates include ‘May 22’ (p. 188), ‘July 5th’ (p. 195) Hands: Slare, uncertain	English	Workdiary 29, part 1 See also BP 27, pp. 211–18, 221–53
BP 27, pp. 197–209	Index to Workdiary 29	Early 1670s	Numbers 1–281, 276–300, 600–770 and 801–53 set out in columns on pages now bound out of order; some entries endorsed with words or numbers Hands: Slare, Boyle	English	See above, pp. 165–6
BP 27, pp. 211–18	[Workdiary 29, part 2]	Early 1670s	Further experiments and observations, continuing (in mid-sentence) the series ending on p. 196 Hands: Slare, uncertain	English	Workdiary 29, part 2 The following entry was used in a book by Boyle: 27–239 (pp. 211–13), <i>Effluviūms, Works</i> , vol. 7, pp. 265–6 See also BP 27, pp. 179–96, 221–53
BP 27, pp. 219–20	‘Loose Experiments, Observations & Notes about The Preservation of Bodies’ [Workdiary 25]	Late 1660s	Experiments involving the preservation of caterpillars, milk and cream Hand: F	English	Workdiary 25
BP 27, pp. 221–53	[Workdiary 29, part 3]	1670s	Further experiments and observations, continuing the series ending on p. 218. Marginal dates include ‘Decemb. 27’ (p. 233), ‘Jan 5th’ (p. 233), ‘Febr 7’ (p. 235) and ‘15 Novemb.’ (p. 241) Hands: Slare, uncertain	English	Workdiary 29, part 3 The following entries were used in books by Boyle: 29–250, 251, 254, 255 (pp. 223–31), <i>Flame and Air, Works</i> , vol. 7, pp. 120–2 29–288 (p. 247), <i>Saltness of the Sea, Works</i> , vol. 7, p. 440 See also BP 27, pp. 179–96, 211–8

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 27, pp. 253–73	Unpublished observations intended for continuation of ‘Superficial Figures of Fluids’	1670s	These were subsequently mislaid; cf. final sentence in published text, where Boyle says that more experiments are forthcoming. Endorsed ‘The last papers about the surfaces of contiguous liquors’ Hands: Bacon (pp. 253–7), Slare (pp. 259–73), corrections by Boyle	English	Published in <i>Works</i> , vol. 8, pp. xlii–xlv, 584. On pp. 287–9, see Principe, <i>Aspiring Adept</i> , pp. 126–7.
BP 27, pp. 275–96	Recipes, including ‘Disolvant pour Le Sol et poudre pour La fonte Des Diamans’ (pp. 275–7); ‘The Receipt for Pearles’ (p. 292); ‘Multiplication Du Saltpetre’ (pp. 283–5); ‘Inke for the Rolling Presse’ (by John Evelyn: dated ‘Apr 2d 1660’) (pp. 293–4)	Late 17th century	Hands: E, ?, ?B, Evelyn	English, French	
BP 27, pp. 297–314	‘Of the Petrifick Spirit’	1660s	The title is in pencil Hand: H	English	Published in <i>Works</i> , vol. 13, pp. 371–6. See also BP 24, pp. 1–15, BP 25, pp. 127–33
BP 27, pp. 315–26	[Sir Robert Moray], ‘An account of Glasse Drops’ together with ‘Observations of the rising up of liquors in one tube of Glasse Made By Dr Henshaw’	1661	1. Cf. Birch, <i>Royal Society</i> , vol. 1, pp. 37–41. 2. Cf. Birch, <i>Royal Society</i> , vol. 1, p. 18. Pp. 324–5 blank Scribal hands	English	
BP 27, p. 327	Extracts from letter from Boccone to Oldenburg	30 April 1675 NS: i.e. 20 April 1675 OS	Hand: Oldenburg	English	Published in <i>Oldenburg</i> , vol. 11, pp. 283–5

Ref.	Title	Date	Description	Language	Related material
BP 27, pp. 328–30	Extracts from letters from Sir George McKenzie sent by Gregory to Oldenburg	25 April 1675	Hand: Oldenburg	English	Partly printed in <i>Phil. Trans.</i> , 10 (1675), 307. See also <i>Oldenburg</i> , vol. 11, p. 287n; <i>Correspondence</i> , vol. 6, pp. 424–5
BP 27, pp. 331–2	‘Quer[ies] about Gems’	1660s–1670s	Hand: Oldenburg	English	Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 28–30
BP 27, pp. 335–46	Latin version of a treatise on the generation of pearls	Late 17th century	Said to have been written by an ‘Illustrious man’ in ‘a language little known in these parts’, and then translated into French Hand: uncertain	Latin	
BP 27, pp. 347–59	Account of various experiments with ‘Statical Baroscope’	1670s	P. 360 blank Hand: Slare	English	
BP 27, pp. 361–2	Account of Torricellian experiment in French	1660s	Hand: ?	French	
BP 27, pp. 363–8	MS version of part of <i>Flame and Air</i>	1660s	‘Experiment the —’, containing a draft of ‘Difficulty of Preserving Flame without Air’, experiment II, except first paragraph. Published portion is crossed through; the rest not published. NB: Original wording on p. 365, ‘Your Lordship’ (altered to ‘You’), shows that this was once intended for <i>Spring, 1st Continuation</i> (1669). P. 368 blank Hands: J (top of p. 363), K, uncertain (marginal addns)	English	<i>Works</i> , vol. 7 pp. 98–9. Abandoned version published <i>ibid.</i> , pp. xxiii–xxv
BP 27, pp. 369–70	Diagram of experimental apparatus	Late 17th century	Hand: unknown		



Ref.	Title	Date	Description	Language	Related material
BP 27, pp. 371–3 466	‘Some Observations Concerning the Texture & similar parts of the body of a tree, which may holde also in shrubs & other woody Plants’	Late 17th century	Late 17th Hand: unknown	English	
BP 27, pp. 374– 466	Geometrical and optical diagrams and diagrams of experiments and experimental equipment, interspersed by occasional leaves of text	Late 17th century	Text as follows: p. 380: measurements of specific gravity P. 385: ‘The Second Volume of the Medicina Hydrostatica shall God permitting consist of these four Parts’. Copy of MS 186, fol. 85v P. 402: cover sheet P. 463: notes on diagram Hands: Slare (p. 385), Bacon (p. 385), unknown	English	For p. 385, see <i>Works</i> , vol. 11
BP 27, p. 467	Latin mathematical notes and equations	Late 17th century	Late 17th Hand: unknown	Latin	

Volume 28

Folio-size volume; paginated; 412 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 28, pp. 1–98	‘Memoirs for the Natural History of Tin’: introduction, followed by pages with headings, with occasional passages of text inserted	1670s– 1680s	Pp. 93–5 duplicate material appearing on pp. 1 and 89–90 Hands: Bacon, Greg (title and p. 89), ?	English	Published in <i>Works</i> , vol. 14, pp. 133–43
BP 28, pp. 99–108	Section of text of <i>Medicina Chromatica</i>	c. 1680	Hand: Greg, some addns by Bacon P. 99 blank	English	Published in <i>Works</i> , vol. 14, pp. 317–25

Ref.	Title	Date	Description	Language	Related material
BP 28, pp. 109–16	MS version of parts of <i>Human Blood</i>	c. 1680	(1) MS version of preface, lacking dedication to John Locke but otherwise complete; showing several changes in wording, but almost identical with published version (2) MS version of introduction to part I, lacking final two sentences of second paragraph and final paragraph. Final paragraph in MS not printed Hands: Greg, uncertain	English	<i>Works</i> , vol. 10, pp. 5–7, 9–11, including previously unpublished material
BP 28, pp. 117–20	Copied extracts, including copy of cure for ague signed by William Smith, curate of Deptford, and given to Boyle by Evelyn	1670s–1680s	P. 120 blank Hand: Bacon	English	
BP 28, pp. 121–207	Unpublished Latin translation of part of <i>Christ. Virt., I</i>	c. 1690	Complete when combined with BP 25, pp. 123–5 Hand: M	Latin	<i>Works</i> , vol. 11, pp. 281–327
BP 28, pp. 209–35	MS version of part of <i>Usefulness, II, sect. 1</i>	1650s or early 1660s	First half of Essay III, missing first four paragraphs, some material added later Hand: unknown	English	<i>Works</i> , vol. 3, pp. 332–42 For a similar version, see BP 16, fols. 202–21
BP 28, pp. 237–56	MS version of part of <i>Effluvioms</i>	Early 1670s	‘Determinate Nature of Effluvioms’, ch. IV, missing several long passages; some other changes prior to publication Hand: Slare, Warr	English	<i>Works</i> , vol. 7, pp. 279–92, with gaps Text on pp. 245–7 copied from BP 27, pp. 117–18
BP 28, pp. 257–8	Latin text and mathematical equations: propositions ‘33’ and ‘34’; endorsed ‘Ex Euclid Elementorum lib. (?), pag. 478, 479’	Late 17th century	Perhaps connected with Wallis material in BP 8, fols. 188–9, BP 10, fols. 2–3, 65–6 Hand: uncertain	Latin	

Ref.	Title	Date	Description	Language	Related material
BP 28, pp. 259–63	Fragments of a set of notes on cold, many with information provided by Samuel Collins	1660s or later	All published in ‘Appendix’ to 2nd edition of <i>Cold</i> . Numbered ‘44’ to ‘68’ in manuscript; numbered quite differently in published text. May be copies of lost originals from 1660s onwards Hand: ?Bacon	English	<i>Works</i> , vol. 4, pp. 551–3, 569, 573
BP 28, pp. 265–75	Fragment of Boyle’s ‘Essay on Spontaneous Generation’	1650s	Paginated 26–32 (28 and 29 now out of order) Hand: 1650s	English	Published in <i>Works</i> , vol. 13, pp. 277–81
BP 28, pp. 277–83	Miscellaneous reports, observations, recipes and memoranda, at least some of them extracts from (lost) work diaries	c. 1690	Including report of astronomical phenomenon dated ‘Aug. 8 1688’ from Lord Shannon (p. 283). P. 284 blank Hand: Bacon	English	See above, p. 169
BP 28, pp. 285–91	Experiments concerning atmospheric pressure	Late 17th century	Hand: uncertain	English	
BP 28, pp. 293–6	Material relating to <i>Usefulness</i>	1660s	Part of introduction to unpublished ‘Essay XIII’ Hand: F, cover slip by Miles	English	Published in <i>Works</i> , vol. 13, pp. 350–4. See <i>ibid.</i> , pp. liv–lvi, for details Continued in BP 10, fols. 27–8. Copy of BP 38, fols. 85–6. Copied out in BP 24, pp. 375–85.
BP 28, pp. 297–9	Latin extracts from an ‘Oration’	1670s–1680s	Hand: Bacon	Latin	
BP 28, pp. 301–7	MS version of part of <i>Effluviis</i>	1660s	Introductory passages as follows: (i) first two paragraphs of ‘Determinate Nature of Effluviis’ (pp. 301–3) (ii) first two paragraphs of ‘Great Efficacy of Effluviis’ (pp. 305–7) Hand: H	English	(i) <i>Works</i> , vol. 7, pp. 275–6 (ii) <i>Works</i> , vol. 7, p. 257

Ref.	Title	Date	Description	Language	Related material
BP 28, pp. 309–12	‘Memorials Philosophical Beginning this Newyears day 1649/50 & to End with the Year. And so, by God’s Permission, to be annually continu’d during my Life’ [Workdiary 6]	1650	Medical recipes, mainly from Worsley and Boate Hand: early Boyle	English	Workdiary 6
BP 28, pp. 313–6	MS version of experiment 45 of <i>Spring, 1st Continuation</i>	1660s	Hand: K	English	<i>Works</i> , vol. 6, pp. 148–50
BP 28, pp. 317–26	Latin accounts of experiments and recipes, including lengthy account of producing purified salts and spirits	1670s–1680s	Hands: Bacon, ?	Latin	
BP 28, pp. 327–9	Fragment of MS version of text of <i>Usefulness, II, sect. 1</i>	1650s or early 1660s	Section of Essay V, on the weapon-salve; first part of paragraph starting on p. 430 interpolated later. P. 330 blank Hand: rounded 1650s	English	<i>Works</i> , vol. 3, pp. 430–2
BP 28, pp. 330–1	‘Ratio extrahendi ex omnibus Metallis, Mercurium Paracelsum’	Mid-17th century	Scribal hand	Latin	
BP 28, p. 333	Two scraps of paper giving key to chemicals numbered 20–41 and 76–108	1670s–1680s	Hand: Bacon, altered by Boyle.	English	Cf. R.E.W. Maddison, <i>The Life of the Hon. Robert Boyle</i> (London, 1969), p. 171n
BP 28, p. 335	Material relating to <i>Spring, 1st Continuation</i>	1660s	Unpublished ‘Postscript’ to one or more of the series of Toricellian experiments. P. 336 blank Hands: K, E	English	Published in <i>Works</i> , vol. 6, p. xxvi



Ref.	Title	Date	Description	Language	Related material
BP 28, pp. 337–40	Recipes for chymical processes [Workdiary 31]	c. 1680	Various marginal dates, starting ‘August the 2d 78’ and continuing to ‘Nov: the 22’ Hands: C, B	English	Workdiary 31
BP 28, pp. 341–71	Various sections of text, interspersed with recipes, some on pasted-in slips	Late 17th century	Topics include experiment with oil of vitriol (pp. 343–6) and effects of heart and cold and qualities of bodies (pp. 351–4) Hands: Slare, Boyle, E, Emes	English, Latin	
BP 28, pp. 373–5	Fragment of Latin translation of ‘Heat and Cold’ ( <i>Mechanical Qualities</i> )	1660s–1670s	From last lines of Experiment XXVI to end of work. Pp. 373–4 partly torn away Hand: ?N	Latin	<i>Works</i> , vol. 8, pp. 360–1
BP 28, pp. 377–80	Material relating to <i>Usefulness</i> , II, sect. 1	1650s or early 1660s	Fragments on medical topics, one used in the published <i>Usefulness</i> , the others apparently not. P. 380 blank Hand: rounded 1650s	English	<i>Works</i> , vol. 3, pp. 425–6
BP 28, pp. 381–90	MS version of part of <i>Usefulness</i> , II, sect. 2	1650s or early 1660s	Final lines in point ‘3’ and all of point ‘4’ in essay on ‘Usefulness of Mathematics’. Text on fol. 381 follows continuously from BP 17, fol. 74. P. 390 blank Hand: angular 1650s	English	<i>Works</i> , vol. 6, pp. 445–7 See also BP 17, fols. 71–4
BP 28, pp. 391–4	MS version of part of <i>Spring</i> , 1st Continuation	1660s	Experiment XXXIV, missing second trial and postscript Hand: J	English	<i>Works</i> , vol. 6, pp. 119–21
BP 28, p. 395	Material relating to <i>Spring</i> , 1st Continuation	1660s	Unpublished ‘Experiment the —’. Hand: K, corr. by Boyle?	English	See <i>Works</i> , vol. 6, p. xxvii Copied in BP 26, fol. 207
BP 28, pp. 397–8	Recipes for jewellers’ cement	Late 17th century	P. 398 blank Hand: Unknown	English	

Ref.	Title	Date	Description	Language	Related material
BP 28, pp. 399–402	‘A Summary Account Of my whole Designe concerning Vegetables’, including lists of matters to be considered (incomplete).	1660s–1670s	Hand: Oldenburg	English	
BP 28, pp. 403–5	List of headings ‘Of Fermentation’ and list of things to remember	Late 1650s–1660s	Hand: 1650s	English	See also BP 26, fol. 225
BP 28, p. 406	‘Particulars belonging to the Scepticall Chymist’.	1660s	Set of headings, probably intended for <i>Producibleness</i> ; post-dates 1st edition of <i>Sceptical Chymist</i> Hand: G	English	See <i>Works</i> , vol. 9
BP 28, p. 407	French paper concerning navigational skills of Sr. Guillet	Late 17th century	Hand: unknown	French	
BP 28, pp. 409–12	Notes on production of ‘Glasse of Antim[ony]’, etc., and ‘Author’s Tincture	Late 17th century	Endorsed by Miles Hand: uncertain	English	

Volume 29  
Quarto-size volume; foliated; 248 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 29, fols. 1–10	‘Dr Becheri Theoria, seu Opinio Singularis de Metallorum Generatione et Tractatione’	1670s–1680s	Copy of Latin tract by Becher, with further page of relevant text Hands: L, ?	Latin	

Ref.	Title	Date	Description	Language	Related material
BP 29, fols. 11–31	‘Monticulus Mineralis’; Latin tract on minerals	1670s–1680s	Hand: Bacon	Latin	
BP 29, fols. 32–4	‘La vera vernice della china’ and other recipes in Italian	1670s–1680s	Fol. 34 is a cover sheet Hand: Bacon	Italian	
BP 29, fols. 35–76	Unpublished Latin translation of ‘Examen of Antiperistasis’ ( <i>Cold</i> )	1670s–1680s	Incl. ‘Postscript’ Hand: L	Latin	<i>Works</i> , vol. 4, pp. 459–98
BP 29, fols. 77–82	Latin version of text concerning Boyle’s views on occasionalism	1670s – 1680s	Translation of text in BP 10, fols. 38–40 Fol. 77 blank Hand: L	Latin	See P. Anstey, ‘Robert Boyle on Occasionalism: An Unexamined Source’, <i>Journal of the History of Ideas</i> , 60 (1999), 57–81, on pp. 59–62 See also BP 10, fols. 38–40
BP 29, fols. 83–105	Unpublished Latin translation of Essay I of <i>Usefulness, I</i>	Late 17th century	Hand: unknown	Latin	<i>Works</i> , vol. 3, pp. 197–212
BP 29, fols. 106–9	‘De Anima Perpetui Mobilis, seu Explicatio Causae moventis naturalis in Mobili Perpetuo’	Mid 17th century	2 copies of the preface to a work on perpetual motion Hand: 2 scribal hands	Latin	
BP 29, fols. 110–45	‘Oeuvre Philosophique’, Part I: assortment of chemical and alchemical experiments and recipes derived from M. Carton, M. Saumaise, Dr Farrar and Clodius, evidently at least in part via Sir Kenelm [Digby] (see endorsement on fol. 135v)	Mid 17th century	French text illustrated by diagrams and with additions in English, including a recipe for a menstruum by ‘Dr. Claudius’. Fol. 146 blank except for endorsements Hand: John Matson	French, English	See <i>Correspondence</i> , vol. 4, pp. 409–10

Ref.	Title	Date	Description	Language	Related material
BP 29, fols. 147–50	Henry Power, ‘Objections against the funicular Hypothesis of Franciscus Linus’	14–15 Oct. 1661	Hand: Power	English	Excerpt from fol. 149 printed in <i>Defence</i> , part II, ch. 4 ( <i>Works</i> , vol. 3, p. 56). See also BP 26, fols. 202–3
BP 29, fols. 151–82	‘Of Cyder and Winy Liquors’	1658	Extracts of letters from Beale and Dury, various dates in 1658, with cover sheet by Miles giving details of content Hand: Misc. scribal hands, with title by Hartlib. Notes in another hand on fol. 182v	English	See <i>Correspondence</i> , vol. 6, p. 425 See also HP 52/26A-118B, passim
BP 29, fols. 183–6	‘Johannis Joachimi Becheri Sr. Caesareae Majestatis Ferdinandi III quondam Mathematici Nova Inventio Argo-nautica’	c. 1650s	Latin text on an invention by Becher; date of original pre-1657 Hand: unknown	Latin	
BP 29, fols. 187–8	‘Sur l’eau de la Mer de 8 a 12 ans’	Late 17th century	Hand: unknown	French	
BP 29, fols. 189–90	Unpublished Latin translation of part of <i>Producibleness</i>	? 1680s	Part II, section I Hand: uncertain	Latin	<i>Works</i> , vol. 9, pp. 52–4
BP 29, fols. 191–4	Diagram of the Tychonic system of universe, entitled ‘Systema Novum’ (fol.191) and objections to it in Latin (fols. 192–4)	[1659]	Also text on eclipse of sun dated 14 November 1659 (fol. 191v) Scribal hand. Fol. 194 is a cover sheet sending the contents to Boyle, in Hartlib’s hand	Latin	See <i>Correspondence</i> , vol. 6, p. 425
BP 29, fol. 195	MS version of part of text of <i>Spring, 2nd Continuation</i>	May–Dec. 1678	Published text is slightly more elaborate Hand: ? (not Papin)	Latin	<i>Works</i> , vol. 9, pp. 155–7
BP 29, fol. 196	Account of experiment with heated powdered glass	1670s–1680s	Hand: Bacon	English	



Ref.	Title	Date	Description	Language	Related material
BP 29, fols. 197–206	Unpublished Latin translation of ‘Natural and Preternatural States of Bodies’ ( <i>Saltiness of the Sea</i> )	? 1680s	Hand: L	Latin	<i>Works</i> , vol. 7, pp. 419–26
BP 29, fols. 207–18	Sections of Latin text relating to <i>Usefulness</i>	? 1680s	Hand: L	Latin	Published in <i>Works</i> , vol. 13, pp. 348–61. See also <i>ibid.</i> , pp. liv–lvi See also BP 9, fols. 162–3; BP 10, fols. 27–8, 90–2; BP 24, fols. 375–97; BP 28, fols. 293–6
BP 29, fols. 219–48	Unpublished Latin translation of parts of <i>Notion of Nature</i>	1680s	Most of section I, and arguments 1–3 in section V (wrongly labelled ‘IV’ in MS). Contains one sentence found (though worded differently) in printed Latin editions, but not in English edition Hand: L	Latin	<i>Works</i> , vol. 10, pp. 445–51, 483–7

Volume 30  
Quarto-size volume; paginated; 550 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 30, pp. 1–52	‘Medulla Philosophiae. The marrow of Philosophy compiled by George Rypley [Ripley] cannon of Bridlington [1476], copied by me Thomas Potter 1580. together with the marginall notes that I found in the same copy’, and ‘Fragmenta Riplaei’	1660s–1670s	Alchemical texts Hand: N	English, Latin	

Ref.	Title	Date	Description	Language	Related material
BP 30, pp. 53–72	‘Hic chara Philosophia mea Elixir in solo Mercurio’: recipe for elixir using mercury solution, followed by ‘Opus Rogeri Bacon’ and letter from Ripley to [Arch]Bishop of York on elixir (pp. 63–8)	1670s–1680s	Hand: Bacon	Latin, English	
BP 30, pp. 73–175	Unpublished Latin translation of ‘Volatility’ ( <i>Mechanical Qualities</i> )	? 1680s	Hand: L	Latin	<i>Works</i> , vol. 8, pp. 421–41
BP 30, pp. 177–230	Unpublished Latin translation of ‘Fixedness’ ( <i>Mechanical Qualities</i> )	? 1680s Hand: L	Has running head on each page Fol. 230 blank	Latin	<i>Works</i> , vol. 8, pp. 443–55
BP 30, pp. 231–82	Unpublished Latin translation of parts of <i>Languid Motion</i>	? 1680s	Latter part of <i>Languid Motion</i> (for the rest, see BP 33, pp. 377–432) and all of ‘Salubrity of the Air’ Hand: L	Latin	<i>Works</i> , vol. 10, pp. 251–349
BP 30, pp. 283–90	French recipes	Late 17th century	Pp. 291–8 blank Hand: unknown	French	
BP 30, pp. 299–316	Text concerning chemical preparation of salt	1670s–1680s	Hand: Bacon	English	
BP 30, pp. 317–32	Unpublished Latin translation of ‘A Short Memorial of some Observations made upon an Artificial Substance’, ( <i>Philosophical Collections</i> , 1677)	1680s	Hand: L	Latin	<i>Works</i> , vol. 9, pp. 441–6

Ref.	Title	Date	Description	Language	Related material
BP 30, pp. 333–40	‘Remarques Curieuses sur la Roche dont on fabrique les turquoises d’Occident’	Late 17th century	French text on a stone used for counterfeit turquoise Hand: unknown	French	
BP 30, pp. 341–52	German paper, evidently on assaying of minerals	Late 17th century	Hand: uncertain (?Clodius)	German	
BP 30, pp. 353–94	French manuscript on chemistry, copied from a MS owned by M. de la Vour (cf. p. 387)	Late 17th century	Pp. 391–4 blank except endorsements Two unknown hands (second at pp. 366–7, 387–92)	French	
BP 30, pp. 395–405	Unpublished Latin translation of parts of <i>Producibleness</i>	? 1680s	Part II, sections II and III; also part of Author’s preface Hand: uncertain	Latin	<i>Works</i> , vol. 9, pp. 23–8, 54–7
BP 30, pp. 407–9	Incomplete French text describing process	Late 17th century	Hand: unknown	French	
BP 30, p. 411	Records of two experiments with a receiver, dated 16 March and 17 June (no year)	1670s	The second item was printed as experiment XII in ‘New Experiments about the Preservation of Bodies in Vacuo Boyleano’ ( <i>Hidden Qualities</i> ), with some minor differences Hand: Bacon	English	<i>Works</i> , vol. 8, p. 230
BP 30, pp. 413–24	Miscellaneous recipes and accounts of processes, etc.	Late 17th century	Including ‘Arcanum authoris Metamophoseos planetarum’ (i.e. Johann de Monte-Snyders) Hand: Unknown	Latin, English, Italian, French	
BP 30, pp. 425–8	[Workdiary 11]	Early 1650s	Medical recipes Hand: early Boyle	French, English	Workdiary 11

Ref.	Title	Date	Description	Language	Related material
BP 30, pp. 429–40	Italian extract endorsed ‘La Chiave del Gabin. Del Cavagl. Borri’, and Latin recipe	1670s–	Pp. 434–6 and 439–40 blank	Italian,	
		1680s	Hand: Bacon	Latin	
BP 30, pp. 441–4	Verses on natural philosophy and list of proper ‘Explications’ for ‘The Differing Degrees or kinds of knowledge of Nature’	1680s	Hand: Greg	English	
BP 30, pp. 445–52	[Thomas Henshaw], ‘A Diary and a Practike given me by Mr Oughtred’	c. 1660	The title of the version in British Library MS Sloane 2222, fols. 136v–41v, is: ‘A Diarie and Practike given by Mr Oughtred to Mr Thomas Henshaw from whose manuscript I copied itt: June the 6: 1668’ Hand: unknown	English	Published by D.R. Dickson from version in British Library MS Sloane 2222, fols. 136v–41v, in <i>NRRS</i> , 51 (1997), 57–76, on pp. 67–72
BP 30, pp. 453–72	Extracts from Latin works, including one by Zucchi (p. 454)	Late 17th century	Hand: unknown/uncertain	Latin	See Nicolo Zucchi, <i>Optica Philosophia</i> , pars altera (Lyon, 1656), pp. 327–32
BP 30, pp. 473–6	Extracts from letters, some from Christopher Farnier in Leipzig, others from Amsterdam and Montpellier, to Mr [John] Polemann, dated 4, 18 March 1661, etc.	March 1661	Hand: scribal italic	English	See <i>Correspondence</i> , vol. 6, p. 425 See also HP 4/4/6A-B, 15/9/19A–20A
BP 30, pp. 477–9	Further Latin extracts, from Kircher and ‘Andr. Alexandro Germanus’	Late 17th century	Hand: unknown	Latin	See Athanasius Kircher, <i>Mundus Subterraneus</i> (1664)



Ref.	Title	Date	Description	Language	Related material
BP 30, pp. 481–8	Incomplete copy of Joachim Jungius' <i>Protonoeticae Philosophiae Sciagraphia</i>	Mid 17th century	A fragment of this work also survives in Cambridge University Library: a copy may have been sent to Boyle by Hartlib in May 1654. See <i>Correspondence</i> , vol. 1, p. 173 Scribal hand	Latin	Published from the Cambridge MS in H. Kango, <i>Joachim Jungius' Experimente und Gedanken zur Begründung der Chemie als Wissenschaft</i> (Wiesbaden, 1968), pp. 256–71
BP 30, pp. 489–98	Latin chemical notes (2 copies) and brief cosmological notes (p. 495)	1670s–1680s	Hand: Bacon Pp. 493–9, 497–8 blank	Latin, English	
BP 30, pp. 499–506	Incomplete transcript of Starkey's letter to Boyle of April/May 1651	April/May 1651	Hand: Uncertain	English	Published in <i>Correspondence</i> , vol. 1, pp. 90–103 Cf. BL 6, fols. 99–100
BP 30, pp. 507–50	'Barometricall Entrys': numbered notes on weather; dated September–October 1666 and various months of an unknown year	1660s–1670s	Memoranda on p. 527 Hands: mainly E, Slare	English	

Volume 31  
Quarto-size volume; paginated; 554 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 31, pp. 1–96	Unpublished Latin translation of 'Corrosiveness' ( <i>Mechanical Qualities</i> )	? 1680s	Hand: L	Latin	<i>Works</i> , vol. 8, pp. 457–78
BP 31, pp. 97–140	Unpublished Latin translation of 'Alcali and Acid', <i>Mechanical Qualities</i>	? 1680s	Hand: N	Latin	<i>Works</i> , vol. 8, pp. 407–19 Copy of BP 33, pp. 233–64

Ref.	Title	Date	Description	Language	Related material
BP 31, pp. 141–212	Unpublished Latin translation of ‘Chemical Precipitation’ ( <i>Mechanical Qualities</i> )	? 1680s	Hand: L	Latin	<i>Works</i> , vol. 8, pp. 479–96
BP 31, pp. 213–35	‘Notae de Productione Mechanica Malleabilitatis & Rigiditatis’, ‘Notes on the Mechanical Production of Malleability and Rigidity’	? 1680s	Hand: L	Latin	Published in <i>Works</i> , vol. 14, pp. 63–73
BP 31, pp. 237–74	Unpublished Latin translation of <i>Degradation of Gold</i>	? 1680s	Lacking publisher’s note. Pp. 274, 275–6 blank Hand: N	Latin	<i>Works</i> , vol. 9, pp. 7–17
BP 31, pp. 277–94	‘Latin version of a Tract about Flame’	? 1680s	Endorsement by Wotton (p. 294): part of unpublished <i>Mechanical Origin of Light</i> Hand: L	Latin	Published in <i>Works</i> , vol. 14, pp. 55–61 See also BP 10, fols. 119–20
BP 31, pp. 295–397	Latin notes and extracts from Johann Joachim Becher’s <i>Minera Arenaria Perpetua</i> (London 1680), together with notes on various processes by other experimenters, evidently also from Becher	1670s–1680s	P. 398 blank Hand: L	Latin	
BP 31, pp. 399–554	‘Adepti Michaelis Sendivogii, Epistolae Philosophicae ad Sodalem Anno 1646’: copy of (i) part of ‘Statuta Philosophorum Incognitorum’ (pp. 401–24) and (ii) ‘Apographum Epistolarum Michaelis Sendivogii’, 55 letters written	1660s–1670s	On pp. 454–5, a long insertion is made to the text of letter 20 in the margin in an unidentified hand Hand: N	Latin	See also BP 34, pp. 237–326

Ref.	Title	Date	Description	Language	Related material
	from February 1646 to 28 January 1647 by Sendivogius (pp. 424–549). Also ‘Sigillum seu Hieroglyphicus Societatis Philos[o]phorum’ Incognitorum’: text on the secret ‘sign’ of a society of philosophers (pp. 550–4)				

**Volume 32**  
**Quarto-size volume; paginated; 650 pages. 19th-century contents leaf: Science.**  
**The volume comprises English translations of Otto Tachenius’ *Clavis* and *Hippocrates Chemicus* by ‘J.W.’ (p. 323), i.e. John Warr sen.**

Ref.	Title	Date	Description	Language	Related material
BP 32, pp. 1–80	Introduction, Preface and chapters 1–4 of Otto Tachenius’ <i>Clavis</i> , translated by John Warr, sen.	Late 17th century	Dated ‘Venice’, ‘the Ides of Nov: 1668’ (p. 14) Hand: Warr sen.	English	Otto Tachenius, <i>Clavis</i> (Venice, 1669)
BP 32, 81–301	Chapters 11–30 of Otto Tachenius’ <i>Hippocrates Chemicus</i> , translated by John Warr, sen.	Late 17th century	Hand: Warr sen.	English	Otto Tachenius, <i>Hippocrates Chemicus</i> (Venice, 1666)
BP 32, pp. 303–20	‘The Index containing the principall experiments, and other observable things, which occurre in the <i>Clavis</i> aforegoeing’	Late 17th century	Hand: Warr sen.	English	Otto Tachenius, <i>Clavis</i> (Venice, 1669)

Ref.	Title	Date	Description	Language	Related material
BP 32, pp. 323–422	Introductory note and chapters 1–10 of Otto Tachenius’ <i>Hippocrates Chimicus</i> , translated by John Warr, sen.	Late 17th century	Hand: Warr sen.	English	Otto Tachenius, <i>Hippocrates Chimicus</i> (Venice, 1666)
BP 32, pp. 423–628	Chapters 5–9 of <i>Clavis</i> , translated by John Warr, sen.	Late 17th century	Hand: Warr sen.		Otto Tachenius, <i>Clavis</i> (Venice, 1669)
BP 32, p. 630	‘The Index of the Chapters contained in this Clavis’: notes on the whereabouts of specific arguments, in order of their position in the text	Late 17th century	Hand: Warr sen.	English	Otto Tachenius, <i>Clavis</i> (Venice, 1669)
BP 32, pp. 631–50	Further version of Index on pp. 303–20	Late 17th century	Hand: Warr sen	English	Otto Tachenius, <i>Clavis</i> (Venice, 1669)

Volume 33  
Quarto-size volume; paginated; 489 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 33, pp. 1–22	Unpublished Latin translations of ‘New Experiment about the Production of Cold’ and ‘An Attempt to Manifest and Measure the Great Expansive Force of Freezing Water’ ( <i>Saltness of the Sea</i> )	? 1680s	Hand: L	Latin	<i>Works</i> , vol. 7, pp. 381–8, 375–9
BP 33, pp. 23–62	Unpublished Latin translation of ‘Imperfection of Chymists’ Doctrine of Qualities’ ( <i>Mechanical Qualities</i> )	1670s–1680s	Hand: L	Latin	<i>Works</i> , vol. 8, pp. 389–405



Ref.	Title	Date	Description	Language	Related material
BP 33, pp. 63–142	Unpublished Latin translations of ‘Magnetism’ and ‘Electricity’ 1670s–1680s ( <i>Mechanical Qualities</i> )		Hand: L	Latin	<i>Works</i> , vol. 8, pp. 497–523
BP 33, pp. 143–62	Unpublished Latin translation of ‘Efficacy of the Air’s Moisture’ ( <i>Saltiness of the Sea</i> )	1670s–1680s	P. 143 is endorsed by Wotton, ‘In Actis July 18 1666’, evidently owing to confusion with a <i>Phil. Trans.</i> article by Boyle (see <i>Works</i> , vol. 5, pp. 520–6) Hand: L	Latin	<i>Works</i> , vol. 7, pp. 443–51
BP 33, pp. 163–88	Unpublished Latin translation of ‘Statical Hygroscope’ ( <i>Saltiness of the Sea</i> )	1670s–1680s	P. 165 is endorsed by Wotton, ‘Acta July 2 1666’, evidently owing to confusion with a <i>Phil. Trans.</i> article by Boyle (see <i>Works</i> , vol. 5, pp. 514–20) Hand: L	Latin	<i>Works</i> , vol. 7, pp. 427–42
BP 33, pp. 189–231	Unpublished Latin translation of introductory material to <i>Mechanical Qualities</i>	1670s–1680s	(i) ‘Editor lectori’; (ii) ‘Monita’ Hand: L	Latin	<i>Works</i> , vol. 8, pp. 317–27
BP 33, pp. 233–64	Unpublished Latin translation of ‘Alcali and Acid’ ( <i>Mechanical Qualities</i> )	1670s–1680s	Copied out in BP 31, pp. 97–140 Hand: L	Latin	<i>Works</i> , vol. 8, pp. 407–19
BP 33, pp. 265–376	Unpublished Latin translation of part of <i>Producibleness</i>	1670s–1680s	Part II, sections I, II, IV and final section (‘New observations about..’). For more, see BP 33, pp. 433–89; BP 34, pp. 431–46 Hand: L	Latin	<i>Works</i> , vol. 9, pp. 52–66
BP 33, pp. 377–432	Unpublished Latin translation of part of <i>Languid Motion</i>	1670s–1680s	First part of <i>Languid Motion</i> , ends abruptly; for the rest, see BP 30, pp. 231–82 Hand: L	Latin	<i>Works</i> , vol. 10, pp. 251–302

Ref.	Title	Date	Description	Language	Related material
BP 33, pp. 433–89	Unpublished Latin translation of Author’s preface to <i>Producibleness</i>	1670s–1680s	Hand: L	Latin	<i>Works</i> , vol. 9, pp. 23–8 See also BP 33, pp. 365–76, BP 34, pp. 431–46

Volume 34

Quarto-size volume; paginated; 494 pages. 19th-century contents leaf: Science.

Ref.	Title	Date	Description	Language	Related material
BP 34, pp. 1–152	Unpublished Latin translation of Alexander von Suchten’s <i>Concordantia Chymica</i>	17th century	Published in German at Frankfurt, 1606 Scribal hand	Latin	Alexander von Suchten, <i>Concordantia Chymica</i> , in Franz Kieser’s <i>Cabala Chymica</i> (1606), pp. 63ff Cf. BP 14, fols. 47ff
BP 34, pp. 153–236	Unpublished Latin translation of ‘Sceptical Dialogue about the Positive or Privative Nature of Cold’ ( <i>Saltness of the Sea</i> )	1670s–1680s	Hand: L	Latin	<i>Works</i> , vol. 7, pp. 341–67
BP 34, pp. 237–325	‘Apographum Epistolarum Michaelis Sendivogii’, Latin copy of letters of Michael Sendivogius, preceded by note in French relating to one J.J. Destinguel; followed by ‘Sigillum seu Hieroglyphus Societas Philosophorum incognitorum (pp. 320–3)	Late 17th century	The letters are almost identical with those in BP 31, pp 399–554, except that there are slight verbal differences throughout; not all the letters have dates in this version; the final one is dated 18 January 1655 rather than 28 January 1647; and the addition to letter 20 in BP 31 is missing. At the end of the ‘Sigillum’ are 10 lines of verse which in the BP 31 version appear not there but at the end of the ‘Statuta’ (which do not appear here). Pp. 237 and 324–6 blank except for endorsement by Wotton identifying the handwriting as that of Clodius Hand: Clodius	Latin, French	See also BP 31, pp. 399–554

Ref.	Title	Date	Description	Language	Related material
BP 34, pp. 327–51	Unpublished Latin translation of ‘Difficulty of Producing Flame without Air’, followed by ‘Difficulty of Preserving Flame without Air’ and ‘Of the Strangely Difficult Propagation of Actual Flame’ ( <i>Flame and Air</i> )	1680s	Out of order: starts on fols. 331–4, then 329–30, 335–51 Hand: Ramsay	Latin	<i>Works</i> , vol. 7, pp. 85–113
BP 34, pp. 353–404	Unpublished Latin translation of ‘Difficulty of Producing Flame without Air’, followed by ‘Difficulty of Preserving Flame without Air’ and ‘Of the Strangely Difficult Propagation of Actual Flame’ ( <i>Flame and Air</i> )	1670s–1680s	Hand: L	Latin	<i>Works</i> , vol. 7, pp. 85–113
BP 34, pp. 405–20	Unpublished Latin translation of ‘New Experiments about Air and Flamma Vitalis’ ( <i>Flame and Air</i> )	1670s–1680s	Lacking introductory matter Hand: L	Latin	<i>Works</i> , vol. 7, pp. 115–23
BP 34, pp. 421–30	Unpublished Latin translation of ‘New Experiments about Explosions’ ( <i>Flame and Air</i> )	1670s–1680s	Hand: L	Latin	<i>Works</i> , vol. 7, pp. 131–7
BP 34, pp. 431–46	Unpublished Latin translation of part of <i>Producibleness</i>	1670s–1680s	Part II, section III Hand: L	Latin	<i>Works</i> , vol. 9, pp. 55–7 See also BP 33, pp. 265–376, 433–89
BP 34, pp. 447–93	‘Concerning the Transmutation & improvements of Plants’	18 Oct. 1659	Text in the form of a letter by John Beale Hand: scribal italic	English	

Volume 35  
Folio-size volume; foliated; 223 pages. 19th-century contents leaf: Miscellaneous.

Ref.	Title	Date	Description	Language	Related material
BP 35, fols. 1–169	Materials for a thesaurus or dictionary, including lists of words and phrases in English and Latin with numbered references, definitions, and indexes	Late 17th century– mid 18th century	Interspersed with the seven items that follow. Fol. 95 has title ‘De Invocatione Dei’, apparently pre-dating thesaurus/dictionary materials Hand: Warr	English, Latin	
BP 35, fols. 96v–7	Notes on distinction between venial and mortal sin	Late 17th century	This is bound in among the thesaurus/dictionary materials that mainly occupy fols. 1–169	English	
BP 35, fols. 125–6	Table of barometric observations	March 1665/66 to Nov. 1670	This is bound in among the thesaurus/dictionary materials that mainly occupy fols. 1–169 Hand: E	English	
BP 35, fols. 127–8	Index, probably to Workdiary 29, including pencilled references to <i>Exp. &amp; Obs. Physicae</i> on fol. 128v	Late 17th century	This is bound in among the thesaurus/dictionary materials that mainly occupy fols. 1–169 Hands: ?E, Boyle	English	See above, p. 166
BP 35, fols. 133–6	Lists, etc., of Boyle letters by Henry Miles, one on the back of a note from ‘R.P.’, 2 November 1745. Fol. 136 is a note from M.R. to Miles with memoranda on it by Miles	Mid 18th century	This is bound in among the thesaurus/dictionary materials that mainly occupy fols. 1–169 Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 35, fol. 144	Alphabetical list of minerals and other substances	1680s	This is bound in among the thesaurus/dictionary materials that mainly occupy fols. 1–169 Hand: Greg	English	
BP 35, fol. 158	List of letters from Eliot to Boyle	c. 1740	This is bound in among the thesaurus/dictionary materials that mainly occupy fols. 1–169 Hand: Birch	English	
BP 35, fol. 170	Algebraic equation	Late 17th century	Hand: unknown	English	
BP 35, fol. 171	‘The Index to the Paralipomena’	1670s–1680s	Hand: Bacon	English	See chapter 4. See also BP 25, p. 222; BP 35, fols. 190–1, 213v; BP 36, fols. 4, 5, 36, 56, 112–13
BP 35, fols. 172–3	‘The Dayly Reflection. To my Lady Ranalaugh’	Late 1640s	Copy of opening part of BP 7, fols. 269–87 (not an earlier version, as stated in Harwood, <i>Essays</i> , p. 203). Paginated 1–4 Hand: early Boyle	English	Published in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), pp. 203–5 See also BP 7, fols. 269–87
BP 35, fols. 174–5	Prefatory statement concerning work of religious apologetic	1670s–1680s	Hand: Bacon	English	
BP 35, fol. 176	‘Proposals for the propagating of the Christian Religion and converting of Slaves, Whether Negroes or Indians in the English Plantations’	1670s–1680s	Hand: Bacon	English	See also BP 4, fols. 127–8

Ref.	Title	Date	Description	Language	Related material
BP 35, fol. 177	Methodological prescriptions	1670s–1680s	Hand: Bacon	English	
BP 35, fol. 178	Notes on types of experiment	1670s–1680s	Hand: Bacon	English	
BP 35, fols. 179–80	Copy of ‘General Heads for the 1670s or Natural History of a Country’ later ( <i>Phil. Trans.</i> , 1666)		Copy of published text, missing final paragraph Hand: Bacon	English	<i>Works</i> , vol. 5, pp. 508–11 For another copy, see BP 26, fols. 47–8
BP 35, fol. 181	‘Catalogue des Titres ou Chapitres de l’Histoire de l’Air’, or later list of titles in French for <i>General History of Air</i>	c. 1680	Hand: Bacon	French	Published in <i>Works</i> , vol. 12, pp. xxiii–xxiv Cf. BP 26, fols. 31, 45v, and below, fols. 185–6
BP 35, fols. 182–3	‘Notes extracted out of the Florentine Booke’	1670s–1680s	Hand: ?Bacon	English, Italian	See <i>Saggi de naturali esperienze fatte nell’Accademia del Cimento</i> (Florence, 1667)
BP 35, fol. 184	Chapter heads for planned tome 2 of <i>Exp. &amp; Obs. Physicae</i>	1680s	Hand: Greg	Latin	See <i>Works</i> , vol. 11, and above, p. 187
BP 35, fols. 185–6	‘Tituli Ad Naturalem atque Experimentalem Aeris Historiam’, lists of titles in Latin for <i>General History of Air</i>	c. 1680 or later	Hand: Bacon	Latin	Published in <i>Works</i> , vol. 12, xxiii–xxiv See also BP 26, fols. 31, 45v, and above, fol. 181
BP 35, fol. 187	Copy of a list of Boyle’s unpublished writings	3 July 1691	Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, pp. xlv–xlvi Duplicate of BP 36, fol. 72
BP 35, fol. 189	‘The Order of My Severall Treatises’	c. 1665	Hand: E	English	See <i>Works</i> , vol. 14, pp. xl–xli, 331–2 Cf. BP 8, fol. 64v, BP 22, p. 60; and BP 36, fols. 74, 91 and 114

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 35, fols. 190–1	Introductory note and index of chapters to <i>Paralipomena</i>	1670s–1680s	Hand: Bacon	English	See chapter 4. For the index see also BP 35, fols. 171, 213v; BP 36, fols. 4, 5, 36, 56, 112–3. For the note see also BP 36, fols. 4, 36
BP 35, fols. 192–3	Inventory of Boyle’s papers; copy of ‘Contents of boxes A and B’	c. 1684	Hand: Bacon	English	See <i>Works</i> , vol. 14, pp. xliv, 343–4 Cf. BP 36, fols. 119–20
BP 35, fol. 194	Advertisement concerning Boyle’s inability to receive visitors	c. 1690	Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 363–4 See also BP 35, fol. 203; BP 36, fols. 1–2
BP 35, fols. 195–7	Copies of letters to Oldenburg about Boyle’s writings	1670s–1680s	Hand: Bacon	English	Published in <i>Correspondence</i> , vol. 6, pp. 356–60, and in <i>Oldenburg</i> , vol. 3, pp. 145–6, vol. 4, pp. 98–9
BP 35, fol. 198	A sequel referring to ‘the printed Advertisement I gave my Friends and other Virtuosi, that several of my Writings are (in probability) stolen away’	c. 1689	Endorsed by Wotton: ‘Advertisement about Loss of Papers’ Hand: Bacon	English	See <i>Works</i> , vol. 11, p. xxiii Fair copy of MS 187, fols. 15v–17
BP 35, fols. 199–200	Copy of letter to Oldenburg about Boyle’s writings.	1670s–1680s	Hand: Bacon	English	Published in <i>Correspondence</i> , vol. 6, pp. 356–8, and in <i>Oldenburg</i> , vol. 3, pp. 145–6
BP 35, fol. 201	Engraved plate of a sundial, signed ‘Johannes Marke’, London, 1667	1667		Latin	

Ref.	Title	Date	Description	Language	Related material
BP 35, fol. 202	‘The Requisites of a Good Hypothesis’	1680s	Hand: Greg	English	Published by R. S. Westfall, ‘Unpublished Boyle papers relating to Scientific Method. II’, <i>Annals of Science</i> , 12 (1956), 103–17, on pp. 116–17; and by M.A. Stewart, <i>Selected Philosophical Papers of Robert Boyle</i> (Manchester, 1979), p. 119
BP 35, fol. 203	Advertisement concerning Boyle’s inability to receive visitors	c. 1690	Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 363–4. Duplicate of BP 35, fol. 194; cf. BP 36, fols.1–2
BP 35, fol. 204	Partial copy of account of Siam	1670s–1680s	Hand: Bacon	English	Fuller version in BP 39, fols. 76–7
BP 35, fols. 205–8	Proposal for a Universal Society for reforming medicine, education, commerce and the mechanical arts by gathering and transmitting information from all over Europe and setting up schools	17th century	Hand: unknown	Latin	Cf. BP 14, fols. 43–6
BP 35, fol. 209	MS version of part of ‘Advertisement’ to section of <i>Exp. &amp; Obs. Physicae</i> dealing with medical topics	1670s–1680s	Paragraph 1 only Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 397–8. See also <i>ibid.</i> , pp. lxxvi–lxxvii, and BP 18, fols. 99–100; BP 36, fol. 12
BP 35, fols. 210–12	Robert Codrington, Latin ode to Boyle	?2 Oct. 1660	?Holograph	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 422–6
BP 35, fol. 213v	List of chapters of <i>Paralipomena</i>	1670s–1680s	Hand: Bacon	English	See chapter 4. See also BP 25, p. 222; BP 35, fols. 171, 190–1, 213v; BP 36, fols. 4, 5, 36, 56, 112–13



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 35, fol. 214	‘Memoir’ and ‘Advertisements’ for <i>Paralipomena</i>	1670s–1680s	Hand: Bacon	English	See chapter 4. Cf. BP 25, pp. 223–4; BP 36, fol. 3; MS 199, fol. 143
BP 35, fols. 215–19	Engraved plates, mainly by Ger[ard] Vandergucht (early 18th-century), but including reversed version of fol. 201 (fol. 219)	Late 17th century / early 18th century		English, Latin	
BP 35, fols. 220–3	Printed Latin treatise dealing with apocalyptic speculation	Late 17th century	Paginated 1–8, but incomplete at end	Latin	

Volume 36  
Folio-size volume; foliated; 209 pages. 19th-century contents leaf: Miscellaneous.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 36, fols. 1–2	Two copies of ‘Advertisement’ curtailing Boyle’s willingness to receive visitors	c. 1690	For additional copies, see BP 35, fols. 194 and 203 Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 363–4
BP 36, fols. 3–5	Introductory material for <i>Paralipomena</i>	1670s–1680s	Duplicate of BP 35, fols. 214 (points 1–6), 190–1 and 213v Hand: Bacon	English	Published and discussed in chapter 4. See also BP 25, pp. 223–4; BP 35, fols.171, 190–1, 213v–14; BP 36, fols. 36, 56, 112–13; MS 199, fol. 143
BP 36, fol. 6	MS version of Boyle’s justification for writing on single sheets.	c. 1680	Hand: uncertain	English	<i>Works</i> , vol. 12, pp. 359–60

Ref.	Title	Date	Description	Language	Related material
BP 36, fols. 7–8	Boyle’s response to the allegations of ‘Mr H.’	1670s–1680s	Hand: Bacon	English	Published in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 154–6
BP 36, fols. 9–10	MS version of a complaint about plagiarism	1670s–1680s	Fol.10 blank except for endorsement Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 360–2
BP 36, fol. 11	Note concerning specimen of ‘Design’d Processes’	1670s–1680s	Hand: Bacon	English	
BP 36, fol. 12	Alternative version of subsidiary remarks to section of <i>Exp. &amp; Obs. Physicae</i> dealing with medical topics	1670s–1680s	Hand: Bacon	English	Published in <i>Works</i> , vol. 11, pp. lxvi–lxvii. Cf. <i>ibid.</i> , pp. 397–8. See also BP 18, fols. 99–100, BP 35, fol. 209
BP 36, fol. 13	‘The Titles of the Latter Part of the Diffident Naturalist’	1660s	Hand: G	English	
BP 36, fol. 14	Text related to <i>Paralipomena</i>	1670s–1680s	Hand: Smith	English	See above, p. 180, and plate 13. Cf. BP 9, fol. 47; BP 38, fol. 34
BP 36, fol. 15	Further paper on plagiarism	1670s–1680s	Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 362–3 A later version of BP 10, fol. 98
BP 36, fol. 16	Introductory note to table giving true/feigned names of sources of recipes	1670s–1680s	Hand: Bacon	English	Discussed in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 218–19. Cf. MS 189, fols. 59v–60
BP 36, fols. 17–18	MS version of the sequel to 1688 advertisement	1689 or later	Endorsed by Wotton: ‘Rough Draught of the Advertisement’. Copy of MS 189, fols. 24v–5. Fol. 18 blank except for endorsement Hand: Bacon	English	<i>Works</i> , vol. 12, p. 359

Ref.	Title	Date	Description	Language	Related material
BP 36, fol. 19	‘A Scheme or Method of the Experimenta & Observationes Physicae’	1680s	First tome only Hand: Greg	English	See <i>Works</i> , vol. 11, and above, p. 187
BP 36, fols. 20–1	List of papers left with Mrs. Dury, esp. concerning lands, etc.	? Late 1650s	Hand: unknown	English	Discussed in <i>Correspondence</i> , vol. 1, p. 85n
BP 36, fol. 22	Clean copy of opening page of ‘Post-Script’ to <i>Notion of Nature</i>	c. 1680	Hand: Bacon	English	Published in <i>Works</i> , vol. 14, p. 147 See <i>ibid.</i> , p. xxiv
BP 36, fol. 23	Prefatory statement to text on use of experiment and reason in natural philosophy	1670s– 1680s	Hand: Bacon	English	
BP 36, fol. 24	‘A Scheme or List of the Heads to which the following Particulars belonging to the <i>Medicina Chromatica</i> may be refer’d’	1670s– 1680s	From planned sequel to <i>Medicina Hydrostatica</i> Hand: Bacon	English	See <i>Works</i> , vol. 14, p. xxxiii
BP 36, fol. 25	Note on experimental phenomena and prefatory statement	1670s– 1680s	Two pasted-in passages Hand: Bacon	English	
BP 36, fols. 26–7	Mathematical papers	Late 17th century	Hand: Unknown	Latin	
BP 36, fol. 28	List of works by Dr Muller	Late 17th century	Hand: unknown	Latin	

Ref.	Title	Date	Description	Language	Related material
BP 36, fol. 29	List of scientific phenomena to remember	? 1680s	At least one (on aperitive faculty of a key) mentioned in <i>Notion of Nature</i> . Sheet torn out of a notebook Hands: Bacon, C	English	See <i>Works</i> , vol. 10
BP 36, fol. 30	Introductory material concerning use and limits of sense, experience, reason and authority in natural philosophy	1670s–1680s	Hand: Bacon	English	
BP 36, fol. 31	Introductory note concerning work by Boyle	1670s–1680s	Hand: Smith	English	
BP 36, fols 32–35	MS version of ‘philosophical’ part of published list of Boyle’s works	? 1688	With some notes by Miles Hand: Bacon, Miles	English	<i>Works</i> , vol. 11, pp. 187–96
BP 36, fol. 36	Introductory note and index of chapters to <i>Paralipomena</i>	1670s–1680s	Duplicate of BP 35, fols. 190–1 Hand: Bacon	English	See chapter 4. See also BP 35, fol. 214; BP 36, fol. 4
BP 36, fol. 37	Introductory note concerning work by Boyle	1670s–1680s	Duplicate of fol. 31 Hand: Bacon	English	
BP 36, fols. 38–41	Documents relating to Boyle’s arbitration in a dispute between Samuel Hutchinson and Viscount Grandison concerning a method of smelting lead using coal	1677	Robert Thoroughgood was also involved in the matter Hands: Warr; ?	English	Discussed in <i>Correspondence</i> , vol. 5, p. 71n
BP 36, fols. 42–4	Robert Codrington, Latin ode to Boyle	? 2 Oct. 1660	?Holograph	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 415–21



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 36, fols. 45–9	Brief notes marked for various (mostly unpublished) works	c. 1680	Incl. a few on fol. 45 endorsed for ‘C.V. or Conf’ (i.e., <i>Christ. Virt., II</i> ) but apparently not published, and some for ‘Advices’ ( <i>Things above Reason</i> ), at least one of which was published in modified form: a passage on fol. 48v about the axiom, <i>ex nihilo nihil fit</i> . Endorsed (fol. 45), ‘These are some promiscuous thoughts of my owne referable to severall discourses’ Hand: B	English	For the published passage, see <i>Works</i> , vol. 9, p. 414 Other extracts published in MacIntosh 2.1.35–6; 2.2.31–2, 58
BP 36, fol. 50	Birch’s ‘Memorandum’ concerning the proposed edition of Boyle’s works	16 July 1741	Hand: Birch	English	Copy in British Library Add. MS 4229, fol. 79. See also <i>ibid.</i> , fol. 76
BP 36, fol. 51	Printed <i>Advertisement</i> concerning the loss of Boyle’s writings, May 1688	May 1688		English	<i>Works</i> , vol. 11, pp. 169–71
BP 36, fols. 52–3	‘Things To be Done’: list of experiments	1660s / late 17th century	Dates of 6 Aug., 1 Jan. (no year) Hands: F, ?	English	
BP 36, fol. 54	Miscellaneous notes and calculations	Late 17th century	Hand: uncertain	English	
BP 36, fol. 55	List of things to be remembered concerning Boyle’s papers	1670s–1680s	Hand: Bacon	English	
BP 36, fol. 56	List of chapters of <i>Paralipomena</i>	Late 17th century	Hand: uncertain	English	See chapter 4. See also BP 35, fols. 171, 190, 213v; BP 36, fols. 4, 5, 36, 112–3

Ref.	Title	Date	Description	Language	Related material
BP 36, fols. 57–8	Notes on contents of various works by Boyle, including <i>Christian Virtuoso, I, Appendix</i> (1), ‘Chaos of Notes relating to Inflammability’, ‘Requisites of a Good Hypothesis’ (2), text on use of distillation (3), <i>Exp. &amp; Obs. Physicae</i> (4)	1670s–	1. MS version of the fourth summary,	English	1. See <i>Works</i> , vol. 12, pp. 421, 432
		1680s	showing changes in numbering of propositions and containing an early version of point 4. Also contains final 2 paragraphs in preamble to <i>Christian Virtuoso, II</i>		2. Published in M.B. Hall, <i>Robert Boyle on Natural Philosophy</i> (Bloomington, 1965), p. 135,
			Hand: Bacon		3. Published in Rose-Mary Sargent, <i>The Diffident Naturalist</i> (Chicago, 1995), p. 172
					4. See <i>Works</i> , vol. 11, and above, p. 187
BP 36, fols. 59–60	‘A Catalogue of the Honourable Mr. Boyles writings unpublsh’d taken the 7th of July 1684’	7 July 1684	Hand: Bacon	English	Published in <i>Works</i> , vol. 14, pp. 341–2. See also BP 36, fols. 75–6
BP 36, fol. 61	List of contents of boxes A and B	c. 1680	Hand: C	English	Published in <i>Works</i> , vol. 14, p. 340
BP 36, fol. 62	Synopsis of intended treatise, ‘Of Publick Spiritedness’	c. 1649	Hand: early Boyle	English	Published in <i>Works</i> , vol. 1, p. cxii
BP 36, fol. 63	Early version of list of contents of <i>Paralipomena</i>	1670s–1680s	Hand: Bacon	English	See above, p. 188. See also BP 36, fol. 92
BP 36, fol. 64	‘Advertisements’ to <i>Paralipomena</i>	c. 1680	Hand: B	English	See above, p. 194. Fair copy in BP 36, fol. 93v
BP 36, fols. 65–6	‘Of Naturall Philosophie’, a synopsis	Early 1650s	Hand: early Boyle	English	Published in M. Hunter, ‘How Became a Scientist’, <i>History of Science</i> , 33 (1995), 59–103, on p. 70; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 30–1

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 36, fols. 67–8	‘Catalogus quorundum Librorum Nobilissimi domini d. Boyle latinè transcriptorum’, ‘A catalogue of certain books by the Hon. Mr. Boyle translated into Latin’	Late 17th century	Fol. 68 blank except for endorsement Hand: unknown	Latin	Discussed in <i>Works</i> , vol. 14, pp. xxxviii–xxxix
BP 36, fol. 69	List of writings of Boyle, dated ‘Decemb. the 30’	1670s–1680s	Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, p. xlv Cf. MS 186, fols. 33v–4; BP 36, fol. 72
BP 36, fol. 70	Lists of ‘Philosophicall Essays’, ‘Experiments unpublished’, etc	c. 1654	Endorsed by Wotton ‘a very old Catalogue in Mr Boyl’s own Hand, of Essay’s he either made or designed to make’ Hand: early Boyle	English	Published in <i>Works</i> , vol. 14, p. 330
BP 36, fol. 71	‘Tituli Ad Naturalem atque Experimentalem Aeris Historiam’	c. 1680 or later	List of titles for <i>General History of Air</i> , in Latin; as in BP 26, fol. 45 Hand: Bacon	Latin	Published in <i>Works</i> , vol. 12, pp. xxiii–xxiv
BP 36, fol. 72	List of Boyle’s unpublished writings, dated 3 July 1691	1691	Hand: Bacon	English	Published in <i>Works</i> , vol. 14, pp. 351–2; see also <i>ibid.</i> , pp. xlv–xlv Cf. BP 35, fols. 187–8; MS 186, fols. 33v–4, 86v–8
BP 36, fol. 73	List of writings to ‘seek for’, 7 January 1690/1	1691	Hand: Bacon	English	Published in <i>Works</i> , vol. 14, p. 348
BP 36, fol. 74	‘The Order of My Severall Treatises’	c. 1665	Hand: uncertain	English	<i>Works</i> , vol. 14, pp. xl–xli, 331–2 Cf. BP 8, fol. 64v, BP 22, p. 60; BP 35, fol. 189; and BP 36, fols. 91 and 114

Ref.	Title	Date	Description	Language	Related material
BP 36, fols. 75–6	Catalogue of Boyle’s unpublished writings, 7 July 1684	1684	Hand: Bacon	English	See <i>Works</i> , vol. 14, pp. xliii, 341–2 See also BP 36, fols. 59–60
BP 36, fols. 77v–8	List of desiderata for natural philosophy	1670s–1680s	Hand: Bacon	English	
BP 36, fol. 79	Catalogue of mineral specimens intended for the Royal Society	24 Dec. 1667	Probably by Samuel Colepresse: cf. Birch, <i>Royal Society</i> , vol. 2, p. 241 ?Holograph	English	
BP 36, fol. 80	List of headings concerning copper	1670s–1680s	Hand: Bacon	English	Published in Hunter, <i>Heads &amp; Inquiries</i> , pp. 30–1
BP 36, fols. 81–2	Lists of natural/scientific phenomena, observations, experiments etc.	1660s	Hand: G	English	
BP 36, fol. 83	‘Particulars about Essay the —’	1660s	Long list of topics, some of them discussed in various essays in <i>Usefulness</i> , II, sect. 2 (‘The making of Organs’, ‘The dipping Needle’, ‘Eclipses’), though many did not appear there Hand: G	English	See <i>Works</i> , vol. 6
BP 36, fol. 84	List of contents of part 2 of <i>Exp. &amp; Obs. Physicae</i>	1660s	Hand: Greg	English	See <i>Works</i> , vol. 11, and above, p. 187
BP 36, fols. 85–6	1. Lists of essays and treatises by Boyle, and other notes (with a key to the abbreviations used) 2. Section of workdiary 5	1649	Hand: early Boyle	English	1. Published in <i>Works</i> , vol. 14, p. 329. See also <i>ibid.</i> , p. xxxix 2. (fol. 86v): Workdiary 5, part 4 See also BP 2, fol. 186; BP 3, fols. 90, 95



Ref.	Title	Date	Description	Language	Related material
BP 36, fol. 87	Two pasted-down notes, one listing experimental and other writings, the other things to remember concerning ‘The will’ and other matters	Early 1650s–1680s	Hands: Greg, Boyle	English	
BP 36, fols. 88–90	Lists by Oldenburg of papers ‘mentioned to me by the Honourable Robert Boyle, March 26 1677’	26 March 1677	Fol. 90 blank except for endorsement Hand: Oldenburg	English	Published in <i>Works</i> , vol. 14, pp. 337–9
BP 36, fol. 91	‘The Order of My Severall Treatises’	c. 1665 Hand: E	Further version of list on fol. 74, etc., with variants and additional section	English	Additional section published in <i>Works</i> , vol. 14, p. 332. See also <i>Works</i> , vol. 14, pp. xl–xli, 331–2 Cf. BP 8, fol. 64v, BP 22, p. 60; BP 35, fol. 189; BP 36, fols 74, 114
BP 36, fol. 92	Early version of list of contents of <i>Paralipomena</i>	1670s–1680s	Hand: Bacon	English	See chapter 4. See also BP 36, fol. 63
BP 36, fol. 93v	‘Advertisements’ to <i>Paralipomena</i>	c. 1680	Hand: B	English	Published in chapter 4. See also BP 36, fol. 64
BP 36, fol. 94	MS version of the 21 titles for <i>Cold</i>	? 1660s	Including subtitles to Title XXI, which are missing from published contents list; one of these mistakenly has ‘To the XXI Title’ rather than XI title Hand: uncertain	English	<i>Works</i> , vol. 4, pp. 226–7 Cf. BP 10, fol. 89v
BP 36, fols. 95–6	‘An Index of the Chapters of the Experimenta et Observationes Physicae’ (fol. 95) and ‘Chapters designed for the 2d Tome of Experimenta et Observationes Physicae’	1680s	Hands: Greg (fol. 95), Bacon (fol. 96)	English	See <i>Works</i> , vol. 11, and above, p. 187

Ref.	Title	Date	Description	Language	Related material
BP 36, fol. 97	Numbered list of hydrostatical and other phenomena	c. 1680	Hand: ?A	English	
BP 36, fols. 98–9	Two identical lists of topics relating to light and luminosity	1670s–1680s	Hand: Bacon	English	See also BP 26, fols. 62, 70. Hunter, <i>Heads and Inquiries</i> , pp. xii, 23–4
BP 36, fol. 100	List of nine works by Boyle	1670s–1680s	Hand: Bacon	English	Published in <i>Works</i> , vol. 14, p. xxxviii
BP 36, fol. 101	‘An Idea for the advancement of Experimental Philosophy’	1670s–1680s	Hand: Bacon	English	
BP 36, fols. 102–11	Incomplete list of content of Boyle’s collection of medical and chemical recipes	1670s–1680s	The following numbers appear: 501–624, 1084–1156, 1304–1486, 1706–2209, 2301–46, 2380–2500 Hand: Bacon	English	See above, pp. 84–5
BP 36, fols. 112–13	Two lists of contents of <i>Paralipomena</i> with identical text	1670s–1680s	Fol. 113 has title which fol. 112 lacks Hand: Bacon	English	See chapter 4. See also BP 35, fols. 171, 190–1, 213v; BP 36, fols. 4–5, 35, 56
BP 36, fol. 114	‘The Order of My Severall Treatises’	c. 1665	Hand: E	English	<i>Works</i> , vol. 14, pp. xl–xli, 331–2 (of which this copy is the exemplar) Cf. BP 8, fol. 64v; BP 22, p. 60; BP 35, fol. 189; BP 36, fols. 74, 91
BP 36, fol. 115	Note concerning papers ‘sealed up in this (Paper) case’	1670s–1680s	Hand: Bacon	English	
BP 36, fol. 116	Notes relating to drafting of will	1670s–1680s	Hand: Warr	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 36, fols. 117–20	Contents of boxes A and B	10 July 1684	Two copies Hand: Bacon	English	Fols. 119–20 published in <i>Works</i> , vol. 14, pp. 343–4. See also <i>Works</i> , vol. 14, pp. xlv Duplicating that in BP 35, fols. 192–3
BP 36, fol. 121	Lists of contents of five boxes, dated 21 January [1691]	1691	Hand: Bacon	English	Published in <i>Works</i> , vol. 14, pp. 349–50. See also <i>ibid.</i> , p. xlv See also MS 186, fols. 36v–9
BP 36, fols. 122–3	Inventory of Boyle’s papers, dated 17 September 1691	1691	Hand: Bacon	English	Published in <i>Works</i> , vol. 14, pp. 353–5. See also p. xlvii
BP 36, fols. 124–5	Miles’ notes on the structure of <i>Christ. Virt., II</i> , and his plans for same, with miscellaneous memoranda	1742	Hand: Miles	English	See <i>Works</i> , vol. 12
BP 36, fols. 126–7	Comments on a work in draft form on reason, revelation and the resurrection	Late 17th century	The comments reveal that the text being commented on was written in four notebooks, separately paginated Hand: unknown	French	
BP 36, fol. 128	Miles’ notes and queries concerning Wotton’s ‘Sketch’ of Boyle’s life	Mid 18th century	Hand: Miles	English	Discussed in M. Hunter, <i>Robert Boyle by Himself and his Friends</i> (London, 1994), p. xlvii and p. xci, n. 195.
BP 36, fol. 129	Miles’ list of Boyle letters, 1645–8	1742	Hand: Miles	English	Published in <i>Correspondence</i> , vol. 1, pp. xxviii–xxixn

Catalogue of the Boyle Papers					
<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 36, fol. 130	Miles' notes on his work on <i>Christ. Virt., II</i> , dated 26 Nov. 1742	26 Nov. 1742	Hand: Miles	English	See <i>Works</i> , vol. 12
BP 36, fols. 131–2	Fragment of alphabetical list of Boyle letters sent to Birch for printing, 2 November 1742 ('A' only)	Mid 18th century	Hand: Miles	English	Cf. BP 36, fol. 198
BP 36, fols. 133–4	List of Hooke–Boyle letters and their content, on back of cover of letter to Thomas Edlin	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx
BP 36, fol. 135	Calculations concerning length of Boyle letters, written on incomplete letter concerning vacancies in English church at Amsterdam	Mid 18th century	Hand: Miles	English	
BP 36, fol. 136	Notes on contents of 'Tract about Atheism'	Mid 18th century	Hand: Miles	English	Based on BP 2, fols. 76v–7 See MacIntosh, 1.1
BP 36, fols. 137–9	Miles' notes on length of <i>Christ. Virt., II</i> , and miscellaneous memoranda	1742	Hand: Miles	English	See <i>Works</i> , vol. 12
BP 36, fol. 140	Miles' notes on contents of 'Ethical Elements' (i.e., <i>Aretology</i> )	Mid 18th century	Hand: Miles	English	See MSS 192, 195
BP 36, fols. 141–3	Numbered list by Miles of Boyle manuscripts	1742	Pp. 3–8 of a series, of which fols. 163–4 form pp. 1–2 and 9–10. Fols. 141 and 164 are bound in back to front Hand: Miles	English	Published in Hunter and Principe, 'Lost Papers', <i>Annals of Science</i> , 60 (2003), 269–311, on pp. 297–311, and above, chapter 2, appendix 2



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 36, fols. 144–5	List of Boyle letters made by Miles while sorting them	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx, and passim
BP 36, fol. 146	Synopsis of Miles’ inventories of Boyle Papers	Mid 18th century	Hand: Miles	English	Discussed in Hunter and Principe, ‘Lost Papers’, <i>Annals of Science</i> , 60 (2003), 269–311, on p. 274, and above, p. 78
BP 36, fols. 147–8	Miles’ list of Boyle MSS in the possession of William Clarke, formerly owned by Wotton	Mid 18th century	Hand: Miles	English	
BP 36, fol. 149	Miles’ memoranda on Boyle’s papers	1742	Hand: Miles	English	Discussed in Hunter and Principe, ‘Lost Papers’, <i>Annals of Science</i> , 60 (2003), 269–311, on p. 273, where some items are published: see also above, p. 77
BP 36, fols. 150–2	Lists of letters by Beale and Oldenburg	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx
BP 36, fols. 153–4	Notes by Miles concerning the content of what is now BL 7	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx
BP 36, fol. 155	Miles’ list of Boyle’s unpublished writings	1742	Hand: Miles	English	See <i>Works</i> , vol. 14, pp. xlvii–xlviii, 356–8
BP 26, fol. 156	List of numbers of letters from different correspondents sent to press	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx

Ref.	Title	Date	Description	Language	Related material
BP 36, fols. 157–60	Inventory of Boyle MSS by Miles, divided into categories denoted by letters	1742	Hand: Miles	English	Published in Hunter and Principe, ‘Lost Papers’, <i>Annals of Science</i> , 60 (2003), 269–311, on pp. 282–97, and above, chapter 2, appendix 1
BP 36, fols. 161–2	List of Boyle letters made by Miles while sorting them	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx, and passim
BP 36, fols. 163–4	Numbered list by Miles of Boyle MSS, with associated memoranda	10 Feb. 1743	Pp. 1–2 and 9–10 of a series, of which fols. 141–3 form pp. 3–8. Ancillary note on length of text in print Hand: Miles	English	Published in Hunter and Principe, ‘Lost Papers’, <i>Annals of Science</i> , 60 (2003), 269–311, on pp. 309–11, and above, chapter 2, appendix 2
BP 36, fol. 165	List of published works by Boyle in unknown hand, with notes by Miles	Mid 18th century	Hands: unknown, Miles	English	
BP 36, fols. 166–9	Notes and queries by Miles concerning Boyle MSS	Mid 18th century	Hand: Miles	English	Discussed in Hunter and Principe, ‘Lost Papers’, <i>Annals of Science</i> , 60 (2003), 269–311, on p. 273, where some items are published; see also above, pp. 77–8
BP 36, fol. 170	Incomplete list of unpublished MSS by Boyle	Mid 18th century	Hand: Miles	English	
BP 36, fol. 171	Synopsis of Miles’ inventories of Boyle Papers	Mid 18th century	Hand: Miles	English	Discussed in Hunter and Principe, ‘Lost Papers’, <i>Annals of Science</i> , 60 (2003), 269–311, on p. 274, and above, pp. 78–9
BP 36, fol. 172	List of letters belonging with those on fols. 150–2	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx

Ref.	Title	Date	Description	Language	Related material
BP 36, fol. 173	List by Miles of issues of <i>Miscellanea Curiosa</i> , perhaps to assess completeness of a set	Mid 18th century	Hand: Miles	English	Cf. BP 36, fol. 194
BP 36, fol. 174–5	Notes by Miles of contents of numbered issues, perhaps of a dissenting journal	Mid 18th century	Hand: Miles	English	
BP 36, fol. 176	Draft letter by Miles	Mid 18th century	List of books on verso Hand: Miles	English	
BP 36, fol. 177	List of ‘the subjects of the Tracts that I have yet met with among my Papers, to which other Titles may be added as the Papers belonging to them come to hand’, as also experiments	19 Nov. 1667	Hands: ?; E	English	Published in <i>Works</i> , vol. 14, pp. 333–4
BP 36, fol. 178	Three pasted-down notes	Late 17th century to mid-18th century	(1) List by Miles of material now in BL 7; (2) Memorandum by Oldenburg, printed in <i>Oldenburg</i> , vol. 8, p. xxvi (where it is wrongly said to be in BL 3, fol. 41); (3) Memoranda by Boyle relating to his will, etc. Hands: Miles, Oldenburg, Boyle	English	
BP 36, fols. 179	Further memoranda by Miles relating to his work on Boyle.	Mid 18th century	Writing practice on verso Hand: Miles	English	
BP 36, fols. 180–9	Inventory of Boyle letters in chronological order, with separate groups at end and name index, by William Wotton	c. 1700	Fols. 180–1 are misbound and should follow fol. 185 Hand: Wotton	English	Published in <i>Correspondence</i> , vol. 6, pp. 397–414

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 36, fol. 190	List of books divided into numbered sections	Mid 18th century	Cf. fols. 199–200, 206 Hand: Miles	English	
BP 36, fols. 191–2	Lists by Miles of letters grouped by sender in order of date, with other memoranda	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx
BP 36, fol. 193	Jottings by Miles	Mid 18th century	Hand: Miles	English	
BP 36, fol. 194	Notes evidently linked to those on BP 36, fol. 173	Mid 18th century	On verso, notes and references by Miles, perhaps for sermons Hand: Miles	English	
BP 36, fol. 195	List of numbers of dwelling houses and inhabitants	Mid 18th century	Hand: Miles	English	
BP 36, fol. 196	List of ‘Bound books’ by Miles	Mid 18th century	23 items, including both MSS and printed books (writing practice on verso) Hand: Miles	English	Published in L. Principe, ‘Newly Discovered Boyle Documents in the Royal Society Archive’, <i>NRRS</i> , 49 (1995), 57–70, on p. 65, and above, pp. 68–9
BP 36, fol. 197	List of Oldenburg letters, with notes on content	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxx
BP 36, fol. 198	‘Alphabetical] List of L[ette]rs Sent to the press taken Nov[embe]r 2 1742 & Sent to Mr. Birch’, with additions dated 18 November 1742	Mid 18th century	Hand: Miles	English	Cf. BP 36, fols. 131–2



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 36, fols. 199–200	List of books, including sermons and funeral sermons	Mid 18th century	Hand: Miles	English	CfBP 36, fols. 190, 206
BP 36, fol. 201	Cover sheet, with memoranda by Miles on it	Mid 18th century	Hand: Miles	English	
BP 36, fol. 202	Miles’ copy of William Clarke’s inventory of Boyle MSS in his possession	Mid 18th century	Hand: Miles	English	Discussed in M. Hunter, <i>Robert Boyle by Himself and his Friends</i> (London, 1994), p.1 Copied from the original in British Library Add. MS 4229, fols. 69–70
BP 36, fols. 203–4	Pasted-down slips of paper containing miscellaneous notes by Miles, including on ‘Motives to love G[od]’ and Thomson’s <i>Seasons</i> , together with list of biographical papers, etc.	1742	Hand: Miles	English	
BP 36, fol. 205	Draft letter by Miles; references and calculations on verso	Mid 18th century	Hand: Miles	English	
BP 36, fol. 206	Further numbered lists of sermons, etc., related to fols. 190, 199–200	Mid 18th century	Hand: Miles	English	
BP 36, fol. 207	Notes by Miles, including demographic data, note on William Hook, and list of references	Mid 18th century	Hand: Miles	English	

Ref.	Title	Date	Description	Language	Related material
BP 36, fols. 208–9	‘Theses Mathematico-Physicae de Terra Joannis Placentini. Lesnensis Mathem: Profes: publ: Ordin: Francofurti’ Hand: unknown	Late 17th century	Latin mathematical paper, comprising 30 theses	Latin	

Volume 37

Folio-size volume; foliated; 216 pages. 19th-century contents leaf: Miscellaneous.

Ref.	Title	Date	Description	Language	Related material
BP 37, fols. 1–24	Anti-Catholic tract (opening missing)	26 March 1592	Secretary hand	English	
BP 37, fols. 25v–74	‘Le Barche da Padova’	Late 17th century	Italian treatise; incomplete at end. Apparently unpublished (not the same text as <i>La Barca da Padova</i> (1689)) Hands: unknown	Italian	
BP 37, fols. 75–7	‘Extrait d’un livre intitulé Sepher Raziel’	17th century	Two copies (fols. 75–6, 77) of text attacking a book on magic for impiety, the second incomplete Hand: unknown	French	
BP 37, fols. 78–95	‘Interrogatoire de Michel Magicien’	19 June 1623	Account of interrogation of magician at Moulins by French officials, 19 June 1623 Hand: unknown	French	
BP 37, fols. 96–102	Trial of Florence Newton for witchcraft at Cork assizes	11 Sept. 1665	Hand: unknown	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 37, fol. 103	Extract from Sir James Melville's <i>Memoirs</i> (1683), concerning the North Berwick witch trial	1670s–1680s	Hand: Bacon	English	James Melville, <i>Memoirs</i> , pp. 194–5
BP 37, fol. 104	Note on the composition of 'disolving eagles' and 'celestial eagles'	17th century	Hand: uncertain	English	
BP 37, fol. 105	Diagrams of lines of latitude, with Latin notes	17th century	Hand: uncertain	Latin	
BP 37, fols. 106–7	Notes on Kircher's <i>Mundus Subterraneus</i> and Maxim the Confessor's <i>Opera</i>	Late 17th century	Hand: uncertain hands	English, Latin	See Kircher, <i>Mundus Subterraneus</i> (1664) and Maxim the Confessor, <i>Opera</i> (1675)
BP 37, fol. 108	'The Nature & Uses of the double writing Instrument'	17th century	Hand: unknown	English	
BP 37, fol. 109	Material for appendix to <i>Final Causes</i>	? Late 1680s	Two brief paragraphs on the distinction between ends and uses (the subject of section IV, proposition III of <i>Final Causes</i> , vol. 11, pp. 130–45) Hand: Bacon, corr. by Boyle	English	Published in <i>Works</i> , vol. 14, pp. 170–1
BP 37, fols. 110–13	Miscellaneous notes, some pasted down, on such topics as final causes, spirits, discernment of truths, infinity, the terraqueous globe, the design argument, etc.	1660s–1680s	Hands: Bacon, Greg, Smith, G	English	Section from fol. 110 published in MacIntosh, 2.1.62

Ref.	Title	Date	Description	Language	Related material
BP 37, fol. 114	‘A briefe Definition, Or rather description of the Plague with its Manner of Cure’	Late 17th century	Hand: uncertain	English	
BP 37, fols. 115–16	Text included in <i>General History of Air</i>	1670s–1680s	English translation of Italian letter published in title 15, describing damage caused by a hurricane-force wind near ‘Palma Nova’ Hand: Warr	English	Published in <i>Works</i> , vol. 12, pp. 59–60n
BP 37, fol. 117	Account of unpublished writings by van Helmont	1670s–1680s	Hand: Bacon	English	
BP 37, fol. 118	Note on vast extent of Blany family	1670s–1680s	Hand: Bacon	English	Copy of Workdiary 36–76 (BP 21, pp. 290–1)
BP 37, fol. 119	Account of soft wood found in pit in the Netherlands	1670s - 1680s	Hand: Bacon	English	
BP 37, fol. 120	Account of how in 1665 a friend of Boyle’s, Sir W.C., apparently met Sir John Trelawney near Exeter when he said later that he had been in Plymouth all the time	1660s–1670s	Hand: N, with endorsement by A	English	
BP 37, fol. 121	Requisites of good and excellent hypotheses	1670s–1680s	Hand: Bacon	English	Published in M. B. Hall, <i>Robert Boyle on Natural Philosophy</i> (Bloomington, 1965), pp. 134–5
BP 37, fols. 122–7	Copy of Richard Boyle’s ‘True Remembrances’	Mid 18th century	Evidently from a copy by Lady Ranelagh (fol. 127) (incomplete) Hand: Miles	English	Published in Birch’s <i>Life</i> of Boyle, in his edition of Boyle’s <i>Works</i> (1744), vol. 1, pp. 1–5



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 37, fol. 128	Sentences/phrases from letters to Boyle, perhaps for purposes of identification	Mid 18th century	Hand: Miles	English	See <i>Correspondence</i> , vol. 1, p. xxxn
BP 37, fols. 129–33	‘The Duty of a Mother’s being a Nurse, asserted’	Mid 18th century	Copy by Miles Hand: Miles	English	Published in <i>Works</i> , vol. 13, pp. 65–73 See BP 37, fols. 196–203
BP 37, fols. 134–5	[Ralph Austen] ‘Certain Queries humbly propounded to the honourable Royall Societie’	Late 17th century	Proposals to encourage afforestation, planting of fruit-trees, employment of the poor, settlement of waste lands, etc. ?Holograph	English	
BP 37, fols. 136–7	Incomplete letter justifying Boyle’s medical activities	1670s–1680s	Hands: Bacon, Greg	English	Published in M. Hunter, ‘Boyle versus the Galenists’, <i>Medical History</i> , 47 (1997), 322–61, on pp. 347–8; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 184–5
BP 37, fols. 138–9	Incomplete essay concerning salt	Late 17th century	Fol. 139 blank Hand: unknown	English	
BP 37, fols. 140–1	MS version of part of <i>Usefulness, II</i> , sect. 2	1660s	Paragraph on fishing in essay on ‘Manual Skill’ Hand: F	English	<i>Works</i> , vol. 6, p. 502
BP 37, fols. 142–3	John Beale, ‘For Kitchen Gardens’	7 Dec. 1663	Section of letter otherwise surviving in Early Letters OB 108 Holograph	English	Published in <i>Correspondence</i> , vol. 2, pp. 225–9
BP 37, fols. 144–9	‘For Fidelia’	2 Dec. 1647	Letter signed ‘C.K.’, dated ‘Decemb. 2 1647’. See also BP 37, fols. 154–5 Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 74–83

Ref.	Title	Date	Description	Language	Related material
BP 37, fols. 150–3	‘Against Confidence’	Late 1640s	Letter addressed to ‘Madam’ about views of ‘Cleanthes’. Incomplete: see fols. 158–9 Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 84–90
BP 37, fols. 154–5	Earlier version of part of letter to Fidelia	1647	See BP 37, fols. 144–9 Hand: early Boyle	English	Discussed in <i>Works</i> , vol. 13, pp. xxvii–xxviii
BP 37, fol. 156	‘To one that sent him Mr de S. <i>De la Vanité du Monde</i> ’	Late 1640s	Letter in commendation of a treatise sent by the addressee on the world’s vanities, together with list of prayers Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 91–2
BP 37, fol. 157	Part of letter addressed ‘Deare Jacke’	Late 1640s	Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, p. 93
BP 37, fols. 158–9	Remainder of letter ‘Against Confidence’	Late 1640s	Cf. BP 37, fols. 150–3 Hand: early Boyle	English	
BP 37, fols. 160–3	‘The Gentleman’	Late 1640s	Incomplete paper on attributes of gentility Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 135–8
BP 37, fols. 164–5	‘To my MISTRIS (when I have one ...), presenting hir the Amorous Controversys’	2 May 1645	Dedicatory letter to imaginary mistress, introducing the putative ‘Amorous Controversys’, of which <i>Seraphic Love</i> was the eighth and last part Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 45–8. Discussed <i>ibid.</i> , pp. xxv–xxvi, and in L. Principe, ‘Style and Thought of the Early Boyle’, <i>Isis</i> , 85 (1994), 247–60
BP 37, fols. 166–7	Text headed ‘Scaping into his Study, out of a Crowd of extraordinary vaine Company of both Sexes’	Late 1640s	Beginning: ‘Come deare Philosophy ...’ Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 141–4

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 37, fol. 168	‘Of Deseins & Undertakings’	Late 1640s	Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 129–30
BP 37, fol. 169	‘A Mere fine Gentleman’	Late 1640s	Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 139–40
BP 37, fols. 170–84	‘An Account of Philaretus during his Minority’	1648–1649	Hand: early Boyle	English	Published in R.E.W. Maddions, <i>The Life of the Hon. Robert Boyle</i> (1969), pp. 2–45; M. Hunter, <i>Robert Boyle by Himself and his Friends</i> (1994), pp. 1–22
BP 37, fol. 185	Two ‘Occasional Reflections’	Late 1640s	Torn sheet, formerly folded. Contains one unpublished reflection on each side: recto, ‘Upon the calling of his Man to rise in the Morning’, dated ‘Oct the 5’; verso, ‘Upon Sweetmeats offer’d him after a Banquet’	English	Published in <i>Works</i> , vol. 13, pp. 115–16. See also <i>ibid.</i> , pp. xxx–xxxii
BP 37, fols. 186–93	Moral epistle concerning ethics of treatment of animals	Late 1640s	Hand: early Boyle	English	Published in M. Oster, ‘The Beame of Divinity: Animal Suffering in the Early Thought of Robert Boyle’, <i>British Journal for the History of Science</i> , 22 (1989), 151–79
BP 37, fols. 194–5	Letter from [Boyle] to [Hartlib]	14 Sep. 1655	Original letter Hand: uncertain	English	Published in <i>Correspondence</i> , vol. 1, pp. 190–2
BP 37, fols. 196–203	‘The Duty of a Mother’s being a Nurse, asserted’	15 Aug. 1647	Moral epistle to ‘Madam’ dated ‘August the 15th [16]47’. Fol. 203 blank except for endorsement Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 65–73 See also BP 37, fols. 129–33

Ref.	Title	Date	Description	Language	Related material
BP 37, fols. 204–8	‘Against Painting’	1647	Moral epistle dated ‘February the 12th, 1647’ Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 49–54
BP 37, fols. 209–14	Latin headings, forming a summary of the content of the various books of Grotius’ <i>De Veritate</i>	1660s	Endorsed ‘Grotius’ on fol. 214v. Fol. 209 is a coversheet entitled ‘Locī Communes’ Hand: mainly E	Latin	
BP 37, fols. 215–16	Mathematical calculations	Late 17th century	Hand: unknown	English	

Volume 38

Folio-size volume; foliated; 162 pages. 19th-century contents leaf: Miscellaneous.

Ref.	Title	Date	Description	Language	Related material
BP 38, fols. 1–5	MS version of ‘Articles of Inquiry Touching Mines’ ( <i>Phil. Trans.</i> , 1666)	1660s	Text slightly differently presented, lacking a few phrases from published version and with various insertions, deletions, etc. Incomplete: lacks nos. 74–90 of main text (except the first three words), which must have been on a missing page or pages to which a symbol on fol. 3v keys. Misbound: fols. 4–5 should precede fols. 2–3 Hand: F	English	<i>Works</i> , vol. 5, pp. 529–37, 539–40
BP 38, fols. 6–10	Notes and sections of text on natural philosophy	1670s–1680s	Including pp. 131–4 of a French anti-Cartesian treatise dealing with the nature of body and soul (fols. 7–8) Hands: Bacon, ?, Emes, Greg	English, French	For a fair copy of the last paragraph of fol. 9, see the first paragraph of BP 9, fol. 105



Ref.	Title	Date	Description	Language	Related material
BP 38, fol. 11	MS version of part of <i>Specific Medicines</i>	c. 1680	Paragraphs 6–10 of ‘A Paper belonging to the writings about the Mechanical Origine of Qualities’ Hand: Greg	English	<i>Works</i> , vol. 10, p. 361
BP 38, fols. 12–14	Unpublished passages of medical works	c. 1680	About ‘the two main parts into which, the Art or Method of investigating the Qualities of medicines, may be divided’, apparently intended for text on <i>materia medica</i> ; ‘the following Collection of Receipts’; and the influence of medical theory on practice Hands: Emes, A, Greg	English	
BP 38, fol. 15	Geographical observations.	Late 17th century	Hand: uncertain	English	Published on pp. 167–8 above
BP 38, fols. 16–17	Observations concerning a refrigerated/heated lodestone	c. 1680	Hand: A	English	
BP 38, fol. 18	Scientific notes	1680s	Hand: Greg	English	
BP 38, fol. 19	Latin medical notes	1660s–1670s	Hand: Oldenburg	Latin	
BP 38, fols. 20–1	Pasted-up snippets of text	? 1660s	Including notes on weights of metal used in coining, Italian recipe, and titles 1–5 for (as yet) unpublished parts of <i>Usefulness</i> , continued Latin on BP 10, fol. 94; revised version of BP 8, fol. 1 Hand: E	English, Italian,	<i>Usefulness</i> list published in <i>Works</i> , vol. 13, pp. lxix–lxx
BP 38, fol. 22	Notes on human imperfection and divine perfection, and things to remember in various writings	1660s–1680s	Hands: Smith, G	English	Partly published in MacIntosh, 2.2.36

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 38, fol. 23	MS version of a section of ‘Medica Praescripta Communicata R.B.’	1680s	Latin translation in BP 17, fols. 1–36 Hand: C	English	Published in <i>Works</i> , vol. 14, pp. 302–4
BP 38, fol. 24	[Workdiary 40, part 2]	1680s	Extracts from books Hand: Greg	Latin	Workdiary 40, part 2 See also BP 21, p. 142
BP 38, fol. 25	Brief notes of things to remember in various treatises (cf. BP 38, fol. 22); dated ‘Aprill the 25th’	1660s	Hand: G	English	
BP 38, fol. 26	MS version of part of <i>Examen</i>	1661–1662	Chapter 5, latter part of 3rd paragraph from the end. At the end is the heading ‘Chapt the sixt’, implying that this was going to start at this point. On verso, memoranda by Sharrock Hands: D?, Sharrock	English	<i>Works</i> , vol. 3, p. 152 Memoranda published in <i>ibid.</i> , p. xii
BP 38, fols. 27–30	Pasted-up notes, including fragments of <i>Usefulness</i>	1650s, 1660s	1. MS version of part of point ‘1’ in essay on ‘Usefulness of Mathematics’, following text on BP 17, fol. 73; exactly as published (fol. 27b) 2. Fragments concerning cures, overlapping with text in Essay V, chap. X. Linked with BP 17, fol. 64 (fol. 29) 3. MS version of first, second, and fifth paragraphs in point ‘3’ of essay on ‘Usefulness of Mathematics’ (fol. 30a). Other items deal with scholastic neglect of experience ‘the redintegration of bodies (‘For the 33d sect.’), etc Hands: E, rounded 1650s	English	1. <i>Works</i> , vol. 6, pp. 441–2 2. <i>Works</i> , vol. 3, pp. 417–20 3. <i>Works</i> , vol. 6, pp. 444–5 See also BP 38, fol. 155

Ref.	Title	Date	Description	Language	Related material
BP 38, fol. 31	Passage of text on gems and causes of shining ‘salino-sulphureous Particles’.	1680s	Hand: Greg	English	
BP 38, fol. 32	Fragment of superseded version of part of <i>Hydrostatical Paradoxes</i>	1660s	Concluding ‘Scholium’ to paradox VI Hand: E	English	Published in <i>Works</i> , vol. 5, p. xxv. See <i>ibid.</i> , pp. 245–6
BP 38, fol. 33	MS versions of two passages in <i>General History of Air</i>	1670s	(i) Title 12, paragraph 4; (ii) Title 10, paragraph 1. Preceded by the last sentence of a different anecdote Hand: Slare	English	<i>Works</i> , vol. 12, pp. 46, 29–30
BP 38, fol. 34	Text related to <i>Paralipomena</i>	1670s–1680s	Hand: Smith	English	See BP 9, fol. 47, and above, pp. 179–80
BP 38, fol. 35	Diagram of triangle	Late 17th century	Recipe on verso Hand: uncertain	English	
BP 38, fol. 36	MS version of part of ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	Early 1680s	Proposition III, paragraph 29, exactly as printed; follows text in BP 18, fol. 98 Hand: Emes	English	<i>Works</i> , vol. 10, pp. 334–5
BP 38, fols. 37–9	Fragment of Boyle’s dialogue ‘Of the Requisites of a Good Hypothesis’	1660s	Hands: G, F	English	Published in <i>Works</i> , vol. 13, pp. 270–1
BP 38, fols. 40–1	MS version of part of <i>Effluviiums</i>	Early 1670s	‘Strange Subtilty of Effluviiums’, chapter VI, paragraph 2 to the middle of paragraph 12 (ends mid-sentence on fol. 41v); for more, see BP 38, fol. 115. Entitled, ‘CHAPTER The —’, but first paragraph in published text was added later and next paragraph was somewhat reworded before publication Hand: Slare	English	<i>Works</i> , vol. 7, pp. 250–2

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 38, fol. 42	[Workdiary 28, part 2]	Early 1670s	Aphorisms and memoranda to be used in writing various (mainly unpublished) essays Hand: Slare	English	Workdiary 28, part 2 See also BP 17, fols. 148–63
BP 38, fols. 43–6	MS version of part of <i>Final Causes</i>	1670s or later	Section III, paragraph 15 and first part of 16 (ends mid-sentence on fol. 44), followed by end of paragraph 14 (starts mid-sentence on fol. 46) Hand: Smith	English	<i>Works</i> , vol. 11, 116–17 Fols. 43–4 also published in MacIntosh, 3.4.30
BP 38, fol. 47	Account of experiment about transmission of colourless ink through wetted paper	1670s	Hand: Slare	English	
BP 38, fol. 48	MS version of part of <i>Languid Motion</i>	1670s	Chapter II, paragraph 10 (about a wind-gun), opening sentence slightly reworded Hand: Slare	English	<i>Works</i> , vol. 10, p. 259
BP 38, fols. 49–50	MS version of part of <i>Spring, 1st Continuation</i>	1660s	Experiment VIII, opening paragraph replaced by a longer paragraph in published version Hands: J, K	English	See <i>Works</i> , vol. 6, pp. 57–8, including previously unpublished material
BP 38, fol. 51	Experiment concerning heat	1670s–1680s	Hand: ?Slare, with introduction by A	English	
BP 38, fols. 52–3	Notes relating to <i>Effluvioms</i>	Early 1670s	Rough notes on silver and gold wire, related to discussion of these in ‘Strange Subtilty of Effluvioms’, chapter II. Further paragraph of text and sums on fol. 53v. Fol. 52r is blank Hand: Warr	English	See <i>Works</i> , vol. 7, pp. 234–7



Ref.	Title	Date	Description	Language	Related material
BP 38, fols. 54–5	Fragment of Boyle’s ‘Essay on Spontaneous Generation’	Late 1650s or early 1660s	Hand: 1650s	English, Latin	Published in <i>Works</i> , vol. 13, pp. 283–4
BP 38, fol. 56	Latin account of chemical experiment	1670s	Hand: Slare	English	
BP 38, fols. 57–8	Section of text of <i>Certain Physiological Essays</i>	1650s or early 1660s	English version of passage added to 1661 Latin edition on pp. 67–9; not printed in either English edition Hand: 1650s	English	Published in <i>Works</i> , vol. 2, p. 144n. See also <i>ibid.</i> , pp. 143–4n
BP 38, fols. 59–60	Section of text concerning the circulation of the blood, and an experiment to illustrate it	1670s–1680s	Hand: Warr	English	
BP 38, fols. 61–3	Section of text related to <i>Hydrostatical Paradoxes</i>	1660s	Fragment of an unpublished experiment with oil of turpentine in a funnel, probably related to paradox V. Text on fol. 63 precedes text on fol. 61 Hand: E	English	Published in <i>Works</i> , vol. 5, pp. xxiii–xxv
BP 38, fols. 64–5	MS version of part of <i>Things above Reason</i>	1670s	Two paragraphs in ‘Discourse’, some lines not printed Hand: Slare, corr. in pencil by ?Boyle	English	<i>Works</i> , vol. 9, p. 383 including hitherto unpublished material
BP 38, fol. 66	Notes for <i>Christ. Virt., I</i>	1670s or later	Hand: Smith	English	See <i>Works</i> , vol. 11
BP 38, fol. 67	Fragment from MS version of <i>Lainguid Motion</i>	Late 17th century	Chapter V, paragraph 2, as printed; starts at end of second sentence, lacks most of final sentence Hand: uncertain	English	<i>Works</i> , vol. 10, pp. 268–9

Ref.	Title	Date	Description	Language	Related material
BP 38, fols. 68–70	MS version of part of <i>Christ. Virt., II</i>	? 1680s	Proposition I, section II, subsection I, article III, paragraphs 5 and 8–12. Out of order: marginalia on 69r/v and 68r (paragraph 5), then 69, 68, marginalia on 68v (paragraph 11), finally 70. Bracketed section on 68v not published Hand: Bacon, corr. by Boyle	English	<i>Works</i> , vol. 12, pp. 454–5, 457–8, including previously unpublished material
BP 38, fols. 71–2	MS version of part of <i>Degradation of Gold</i>	1677–1678	Paragraphs 6–10, some changes in wording before publication Hand: C	English	<i>Works</i> , vol. 9, pp. 10–11
BP 38, fol. 73	Two lists of scientific phenomena	1670s	Hand: Slare	English	
BP 38, fol. 74	Text relating to <i>Cold</i>	Early 1660s	Fragment of an experiment with cold temperatures and a glass egg, probably an early version of the experiment in section 11 of Title IX (dated there ‘4 Feb 1661’) Hand: 1650s	English	See <i>Works</i> , vol. 4, pp. 314–16
BP 38, fol. 75	Part of defence speech by ‘E.G.’	1683–1684	i.e., Elizabeth Gaunt, implicated in the Rye House Plot Hand: Warr	English	
BP 38, fol. 76	Part of original version of <i>Usefulness</i>	1650s or early 1660s	Passage on making of lasting ink for inscriptions Hand: 1650s	English	Published in <i>Works</i> , vol. 13, pp. 311–12
BP 38, fols. 77–8	MS version of part of <i>Usefulness, II, sect. 2</i>	1660s	Point 6 in essay on ‘Usefulness of Mathematics to Natural Philosophy’, with unpublished passages on the Torricellian experiment and observations of Archimedes crossed through Hand: E	English	<i>Works</i> , vol. 6, pp. 449–50, including previously unpublished material

Ref.	Title	Date	Description	Language	Related material
BP 38, fol. 79	Section of text on feelings of severed limbs	1660s	Hand: H	English	
BP 38, fol. 80	‘Introductory Preface’	c. 1650	Incomplete Hand: uncertain	English	Published in M.B. Hall, <i>Robert Boyle on Natural Philosophy</i> (Bloomington, 1965), pp. 177–9
BP 38, fol. 81	‘Notes & Experiments belonging to the papers about the History of Qualities ...’	1670s	Containing a draft of ‘Magnetism’ ( <i>Mechanical Qualities</i> ), experiment IV, first two paragraphs, exactly as printed Hand: Slare	English	<i>Works</i> , vol. 8, pp. 502–3
BP 38, fol. 82	Sections of text on substantial forms, etc.	1660s	Hand: F	English	
BP 38, fols. 83–4	Section of text relating to <i>Usefulness, II</i> , sect. 2	Late 1650s or early 1660s	Dealing with unexpected uses of things; passage concerning ivory-black printed in section IV of Essay X; other instances unpublished Hand: rounded 1650s	English	<i>Works</i> , vol. 6. p. 531
BP 38, fols. 85–6	MS version of introduction to ‘Essay XIII’ of <i>Usefulness</i>	1660s	Copied out in BP 28, pp. 293–6, and again in BP 24, pp. 375–85 Hand: F	English	See <i>Works</i> , vol. 13, p. lv and pp. 350ff.
BP 38, fols. 87–8	Section of text dealing with concretion of liquors	Late 1650s or early 1660s	Hand: 1650s	English	
BP 38, fols. 89–91	MS version of part of <i>Producibleness</i>	1670s	Part I, section III, much revised before publication Hand: Slare	English	<i>Works</i> , vol. 9, pp. 39–43, including previously unpublished material

Ref.	Title	Date	Description	Language	Related material
BP 38, fols. 92–3	MS version of part of ‘Superficial Figures of Fluids’ ( <i>Phil. Trans.</i> , 1677)	1670s	Experiments XXI and XXIII, showing several minor changes in wording, but final version is almost identical with published text	English	<i>Works</i> , vol. 8, pp. 583–4
			Hand: Slare		
BP 38, fol. 94	Extracts from workdiaries, etc.	1670s–c. 1680	Hand: Slare	English	Includes extracts from Workdiary 21–613, 692, 706 (see BP 27, pp. 1–159). See above, pp. 167, 175
BP 38, fols. 95–6	MS versions of two passages in <i>Hidden Qualities</i> and five in <i>General History of Air</i> , entitled in pencil: ‘The VIII Title/Particulars referable to the Substance of the Aire; especially as ’tis partly saline’ (fol. 95)	1660s endorsed c. 1680 or later	(a) <i>Hidden Qualities</i> : (i) sentence about <i>antimonium diaphoreticum</i> from ‘Suspensions about Some Hidden Qualities in the Air’, paragraph 21; (ii) passage on the fruit of the juniper tree, from de Rocheford, from ‘Suspensions about Some Hidden Qualities in the Air’, paragraph 22. Has reference not in published text (b) <i>General History of Air</i> , all passages slightly elaborated in the published version: (i) Title 11, paragraph 1 and start of paragraph 2, some changes in wording; (ii) Title 33, paragraphs 1 and 2. Endorsed ‘chap: 8/To the Tract Of the Aire’; (iii) Passage closely related to Title 38, paragraph 3, though published in this form in <i>Hidden Qualities of the Air</i> . Endorsed ‘ch: 7/To the Same Tract’; (iv) Title 34, paragraphs 1 and 2. Endorsed ‘ch: 8/To the Tract of the Aire And the notes about hardness’; (v) Title 11, final two paragraphs (save one), ends mid-sentence at bottom of fol. 96v. Endorsed: ‘ch. 7 or 8./To the Tract of the Aire’. Hands: P, G, E, A, C, with endorsements by Boyle	English	(a) See vol. 8, p. 130; (b) See vol. 12, pp. 30–1, 138–9, 145, 139, 42–3 Includes extracts from Workdiary 21–536, 615. See above, pp. 170, 175



Ref.	Title	Date	Description	Language	Related material
BP 38, fol. 97	MS version of part of <i>Things above Reason</i>	1670s	Four and a half paragraphs in 'Discourse' Hand: Slare	English	<i>Works</i> , vol. 9, pp. 369–70
BP 38, fols. 98–9	Texts concerning effluvia of celestial bodies, etc.	1670s	Hand: Slare	English	
BP 38, fols. 100–1	MS version of part of <i>General History of Air</i>	1670s	Title 19, paragraphs 6 and 7 Hand: Slare	English	<i>Works</i> , vol. 12, pp. 101–2
BP 38, fols. 102–6	Part of paper about the pores and figures of liquors, describing various experiments, etc., interrupted by note accompanying a strange creature, resembling a grasshopper (fol. 104)	1670s	Hands: Slare, ?holograph	English	
BP 38, fols. 107–8	Limitations to distillation etc. in determining the nature of vegetables	1670s	Hand: Slare	English	
BP 38, fols. 109–10	MS version of part of <i>Certain Physiological Essays</i>	1650s or early 1660s	Part of paragraph on lowering an inverted jar into mercury and water, from 'History of Firmness'; some material added later Hand: ?1650s	English	<i>Works</i> , vol. 2, pp. 154–5
BP 38, fols. 111–12	Introduction to Boyle's critique of orthodox medical practice, in the form of a letter	Late 17th century	Hand: uncertain	English	Published in M. Hunter, 'Boyle versus the Galenists', <i>Medical History</i> , 47(1997), 322–61, on pp. 352–4; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 190–2

Ref.	Title	Date	Description	Language	Related material
BP 38, fol. 113	MS version of part of <i>Theodora</i>	1670s	Latter part of paragraph 11 in chapter VI Hand: Slare	English	<i>Works</i> , vol. 11, p. 44
BP 38, fol. 114	MS version of part of ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	Early 1680s	Proposition III, second half of paragraph 34 (except final sentence) and start of paragraph 35 Hand: Emes, addns by Boyle	English	<i>Works</i> , vol. 10, pp. 337–8
BP 38, fol. 115	MS version of part of <i>Effluvioms</i>	Early 1670s	‘Strange Subtilty of Effluvioms’, chapter VI, final three and a half paragraphs; follows text on BP 38, fols. 40–1 Hand: Slare	English	<i>Works</i> , vol. 7, pp. 252–4
BP 38, fol. 116	Section of text concerning distillation	c. 1680	Hand: A	English	
BP 38, fols. 117–18	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	c. 1680	Chapter III, up to and including paragraph XIV, followed by opening lines of final paragraph. MS lacks paragraph numbers Hand: C (fols. 117r and 118); B (fol. 117v)	English	<i>Works</i> , vol. 11, pp. 391–4, 395
BP 38, fol. 119	Inadequacy of anatomists’ understanding of living organisms	c. 1680	Hand: ?A	English	
BP 38, fol. 120	Queries concerning electrical bodies, completing text in BP 22, fols. 197–9	1660s	Hand: F	English	Published in Hunter, <i>Heads &amp; Inquiries</i> , p. 15
BP 38, fols. 121–2	MS version of part of <i>Usefulness, II, sect. 2</i>	1660s	Final paragraph in essay on ‘Manual Skill’ Hand: E	English	<i>Works</i> , vol. 6, pp. 504–5

Ref.	Title	Date	Description	Language	Related material
BP 38, fols. 123–4	MS version of part of <i>Gems</i>	1660s	Section I, paragraphs 4–7, exactly as printed; ends mid-sentence on fol. 123. For earlier version, see BP 25, pp. 423–6 Hand: E, corr. by Boyle	English	<i>Works</i> , vol. 7, pp. 12–13
BP 38, fol. 125	Passage concerning methods of calcining gold	1660s	Hand: F	English	
BP 38, fols. 126–7	Passage complaining of inadequacies of existing writings on natural philosophy	1670s–1680s	Hand: Warr	English	
BP 38, fols. 128–9	Section of text on the nature of firm bodies	Late 17th century	Hand: uncertain	English	
BP 38, fol. 130	Material relating to <i>General History of Air</i>	1670s	Fragment on magnetism and effluvia of the earth, perhaps intended for (the empty) title V Hand: Slare	English	See <i>Works</i> , vol. 12, p. 19
BP 38, fol. 131	MS version of part of <i>High Veneration</i>	c. 1680	Point 10, identical with published text Hand: B	English	<i>Works</i> , vol. 10, p. 167
BP 38, fols. 132–6	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	1660s and 1670s	Chapter I, experiments II, V, VI, and VII, with some unpublished paragraphs on lodestones. Several paragraphs have been copied out within this section. Hand: G (fols. 132–3, 136), Slare (fols. 134–5)	English	Unpublished part published in <i>Works</i> , vol. 11, pp. lxiv–lxvi; see also <i>ibid.</i> , pp. 378–80
BP 38, fol. 137	Section of text about whether amalgam of metals is nobler than its constituents, or a hybrid living creature than its ancestors	1660s and c. 1680	On verso, an observation of Dr Boate Hands: E, ?	English	

Ref.	Title	Date	Description	Language	Related material
BP 38, fols. 138–9	Fragment of ‘Dialogue on Heat Late 17th century and Flame’		Hand: uncertain	English	Published in <i>Works</i> , vol. 13, pp. 268–9
BP 38, fol. 140	Conclusion of a discourse on liquors	1660s	Hand: E	English	
BP 38, fols. 141–2	MS version of part of <i>Final Causes</i>	c. 1680	Section II, sixth paragraph, some rewording at the start Hand: C	English	<i>Works</i> , vol. 11, pp. 98–9
BP 38, fols. 143–4	Natural history observations (funghi and barnacles)	1670s–1680s	Hands: A, Warr	English	
BP 38, fols. 145–8	Passages of text intended for insertion into <i>Usefulness</i> , or another, ancillary treatise	Early 1660s	Hands: D, 1650s	English	Published in <i>Works</i> , vol. 13, pp. 312–7
BP 38, fols. 149–50	MS version of part of <i>Usefulness</i> , II, sect. 2	1660s	Final two and one-half paragraphs of point ‘1’ in essay on ‘Mathematics’ Hand: E	English	<i>Works</i> , vol. 6, pp. 442–3
BP 38, fol. 151	Passage concerning composition of pewter	1660s	Hand: K	English	
BP 38, fol. 152	MS version of part of ‘Respiration’ ( <i>Phil. Trans.</i> , 1670)	1660s	Title X, experiment VI, second paragraph, minor changes in wording. MS contains two additional paragraphs, crossed through, which were not published Hand: K	English	See <i>Works</i> , vol. 6, p. 233, including previously unpublished material



Ref.	Title	Date	Description	Language	Related material
BP 38, fol. 153	MS version of part of <i>Flame and Air</i>	Early 1670s	‘New Experiments about the Relation betwixt English Air and the Flamma Vitalis’, experiment II, final paragraph, showing several changes, but corrected text largely identical with published version, The MS has been scribbled on later by a child, including the words ‘Honored Uncle’ Hand: Slare	English	<i>Works</i> , vol. 7, pp. 119–20
BP 38, fol. 154	Passage concerning the interpretation of others’ experiments	1670s–1680s	Hand: Bacon	English	
BP 38, fols. 155–6	MS version of parts of <i>Usefulness, II</i> , sect. 2, etc.	1660s	(i) Text on fol. 155 follows text at top of BP 38, fol. 30, without a break. MS version of first, second, and fifth paragraphs in point ‘3’ of essay on ‘Usefulness of Mathematics’ (ii) Naturalists’ disputes about the generation of life Hand: E	English	(i) <i>Works</i> , vol. 6, pp. 444–5 See also BP 38, fol. 30
BP 38, fols. 157–60	Fragment of ‘Dialogue on the Transmutation and Melioration of Metals’ and related texts	1670s–1680s	Hand: Bacon, Smith (fol. 160)	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 256–7, 304–7
BP 38, fol. 161	Section of text relating to sequel to ‘Alcali and Acid’ ( <i>Mechanical Qualities</i> )	Early 1680s	Hand: C	English	See <i>Works</i> , vol. 8
BP 38, fol. 162	‘The Latin version of the Christian Virtuoso’: cover sheet	c. 1690	Title only Hand: Boyle	English	

Volume 39

Folio-size volume; foliated; 228 pages. 19th-century contents leaf: Miscellaneous.

Ref.	Title	Date	Description	Language	Related material
BP 39, fols. 1–48	‘Notes taken out of Purchas’s Pilgrims’	1670s–1680s	Concerning various natural and ethnographic phenomena. Fol. 48 is misbound and should follow fol. 38 Hand: Bacon, with addns by Greg	English	See Samuel Purchas, <i>Hakluytus Posthumous or Purchas his Pilgrimes</i> (1625)
BP 39, fols. 49–51	Notes on Hudson’s Bay, from conversation with an employee of the Hudson’s Bay Company	1670s–1680s	Hand: Bacon	English	
BP 39, fol. 52	MS version of part of sequel to ‘Salt-Water Sweetened’ ( <i>Phil. Trans.</i> , 1693)	c. 1683	Final paragraph and latter part of penultimate paragraph Hand: Bacon, corrected and added to by Greg	English	<i>Works</i> , vol. 12, pp. 173–4
BP 39, fols. 53–73	‘Notes taken out of Du Tertres <i>Hist[oire] Nat[urelle] des Antilles</i> ’	1670s–1680s	Hands: Bacon, title by Greg	English	See Jean-Baptiste Du Tertre, <i>Histoire générale des Antilles</i> (1625)
BP 39, fol. 74	‘Notes taken out of a Relation of the French Bishop that came lately from India, touching the worship and Religion of the Kanites’	1670s–1680s	Hand: Bacon	English	
BP 39, fol. 75	‘An Extract out of the Relation made by Paracelsus in the I.. [sic] Book of his Archidoxis’	1670s–1680s	Hand: Bacon	English	Cf. BP 14, fols. 166–77
BP 39, fols. 76–7	Notes from informant on Siam	1670s - 1680s	Hand: C, Greg (with addition by Bacon)	English	See also BP 35, fol. 204
BP 39, fols. 78–80	Latin extracts from ‘Ephmerid: German: Dec: Secundae: Annus Primus’	1670s–1680s	Hand: Bacon	Latin	See the <i>Miscellanea Curiosum</i> of the Academia Naturæ Curiosum (1670 et seq.)

Ref.	Title	Date	Description	Language	Related material
BP 39, fols. 81–94	Further notes from travel books	1670s–1680s	Subjects include pearl-fishing (fols. 81–2); Macacar (fols. 83–4), Tonkin and Laos (fol. 85), Sumatra (fols. 86–7), Africa (fols. 89–91) and Holy Land (fols. 92–4) Hands: Bacon, ?, Greg	French, Latin, English	Works excerpted include Richard Jobson, <i>The Golden Trade</i> (1623), and Nicolas Gervais, <i>Description historique du royaume de Macacar</i> (1688)
		Late 17th century	Various sections of text, relating to others in BP 44: cf. pencil notes by R.P. Stearns at fols. 105, 107 and 140 The material can be divided as follows: Fols. 95–105 is a single text, which goes with (and ends at) fol. 140. This then refers to the 1671 text now in BP 44, fols. 117–26, after which commences an untitled commentary on this (ibid., fols. 127–32). Fols. 107–22 of the present volume follow on from BP 44, fol. 132, with fols. 141 to 180 following fol. 122. After fol. 180 the sequence is apparently: fols. 106, 123–5, 127–39 and 181. Fol. 126 is an unrelated item, a picture of Clayton’s speaking trumpet; on this and Boyle’s interest in it, see E. and D.S. Berkeley, (eds.), <i>The Revd. John Clayton</i> (Charlottesville, Va., 1965), p. xxxvi. Hand: evidently partly holograph, partly scribal	English	See R.P. Stearns, <i>Science in the British Colonies of America</i> (Urbana, 1970), pp. 188–91
BP 39, fols. 182–6	Extracts from letters from Virginia, some signed by P. Smith	1680s	Various dates in 1686 and 1687 Hands: ?, Bacon, Greg	English	See <i>Correspondence</i> , vol. 1, p. xxxvii, and vol. 6, pp. 420, 425 See also BL 6, fol. 53
BP 39, fols. 187–200	Papers relating to imports and exports of various oriental countries, including Japan, China, Ceylon, Batavia	Late 17th century	Hands: ?G, Bacon	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 39, fol. 201	Extract concerning fruit from ‘The History of the Caribby Islands’	Late 17th century	Scribal hand	English	See Charles de Rochefort, <i>History of the Caribby-Islands</i> (Eng. trans. 1666)
BP 39, fols. 202–5	Charles II’s official instructions to the Council for Foreign Plantations	[1660]	Scribal hand	English	
BP 39, fols. 206–11	Letter to ‘My Lord’ proposing methods for encouraging trade in plantations	Late 17th century	Scribal hand	English	
BP 39, fol. 212	Copy of order of Council for Foreign Plantations appointing committee to consider how to encourage emigration	30 June 1672	Scribal hand	English	
BP 39, fol. 213	Note on the antipathy towards the English merchants at Leghorn of Count Bardi, secretary to the Grand Duke of Tuscany’s Council of Trade	Late 17th century	Hand: unknown	English	
BP 39, fols. 214–15	‘A Relation of the Governor of Canada his march with 600 volunteers into the Territories of his Royall Highness the Duke of Yorke in America’, by Colonel Richard Nicolls, 1666	1666	Hand: unknown	English	Evidently sent by John Winthrop: see <i>Correspondence</i> , vol. 3, p. 259
BP 39, fols. 216–17	Notes on conversation with Lord Tarbat concerning cases of second sight in Scotland	3 Oct. 1678	Hand: A	English	Published in M. Hunter, <i>The Occult Laboratory</i> (Woodbridge, 2001), pp. 51–3



Ref.	Title	Date	Description	Language	Related material
BP 39, fols. 218–22	‘A Description of the Diamond Mines’ in the East Indies, ‘sent (as I suppose) by Mr Langham’ (Wotton’s endorsement)	Early 1670s	Possibly Sir William Langhorne: see <i>Works</i> , vol. 7, p. 407. Internal dates include 1670, 1673 (see fol. 220v) Hand: unknown	English	Cf. BP 20, pp. 405ff
BP 39, fols. 223–4	Notes on measurements, weights and coins in East Indies	Late 17th century	Fol. 224 blank except for endorsements Hand: unknown	English	
BP 39, fols. 225–8	Journal of a voyage to and from India by Will. Whitethorne, illustrated with profiles of islands	1669–1670	Dated April 1669 to August 1670 Hand: E	English	

Volume 40  
Folio-size volume; foliated; 153 pages. 19th-century contents leaf: Miscellaneous.

Ref.	Title	Date	Description	Language	Related material
BP 40, fols. 1–2	Certificate of Viscount Ranelagh’s admission as Gent. of Privy Chamber	1670 – 1671	Signed by Earl of Manchester, 24 October 1670, with endorsement dated February 1670/1. Fol. 2 is blank	English	
BP 40, fol. 3	Application for admission to Chelsea Hospital on behalf of former royal trumpeter John Jones, vouched for by Ranelagh	Post 1685	Hand: unknown	English	
BP 40, fol. 4	Draft for clause to provide money for Royal Society in Irish Act of Settlement	[1663]	Hand: Sir Robert Moray	English	Discussed in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), p. 75n

Ref.	Title	Date	Description	Language	Related material
BP 40, fol. 6	Protestation by peers concerning Clarendon's committal by Commons	20 Nov. 1667	Fol. 5 lacking from foliation Hand: unknown	English	
BP 40, fols. 7–8	Account of parliamentary proceedings against Clarendon	[1667]	Hand: uncertain	English	
BP 40, fol. 9	Petition by members of the Corporation for Propagating the Gospel for Attorney-General to intervene in the case of Thomas Bedingfield and his father	[c. 1662]	Hand: unknown	English	See <i>Correspondence</i> , vol. 2, p. 21n; vol. 4, p. 76
BP 40, fols. 10–11	Petition by inhabitants of Stalbridge against their immoral rector, Samuel Rich	[1689]	Hand: unknown	English	See <i>Correspondence</i> , vol. 5, p. 111n; vol. 6, pp. 107, 285
BP 40, fols. 12–13	Petition by East India company, objecting to illegal interlopers damaging trade	Late 17th century	Fol. 13 blank except for endorsement Hand: unknown	English	
BP 40, fols. 14–15	Copy of official account of parliamentary proceedings	Nov. 1680	Hand: unknown	English	
BP 40, fols. 16–46	Report to the Governor and Committee of the Hudson's Bay Company by John Nixon, 1682 (fols. 16–41), followed by extracts from minutes of council meetings dated 1681–2	1681–2	Scribal hands	English	Published in E.E. Rich (ed.), <i>Minutes of the Hudson's Bay Company 1679–84</i> (2 vols., Toronto, 1945–6), vol. 1, pp. 237–304

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 40, fols. 47–59	‘An Answer to the Articles & Charge exhibited against Mr William Erbery before the Honourable Committee for Plundered Ministers’	9 March 1653	Hand: unknown	English	
BP 40, fols. 60–8	Account of debate before House of Lords committee concerning interest of money	Late 17th century	Hand: unknown	English	
BP 40, fols. 69–70	Latin notes on the dynastic link between the Plantagenets and the Dukes of Saxony in the 12th and 13th centuries	Late 17th century	Hand: unknown	Latin	
BP 40, fol. 71	Note on proposed constitution of a dependant province, probably in North America	Late 17th century	Hand: unknown	English	
BP 40, fol. 72	Copy of Lord Monck’s apologia for naval problems in Second Dutch War, especially 1666–7	1660s	Hand: unknown	English	
BP 40, fol. 73	French petition to Monseigneur Bouet for assistance	Late 17th century	Hand: unknown	French	
BP 40, fols. 74–5	M. de Lazancy’s statement about Jesuit plots	1670s–1680s	Hand: Warr	English	
BP 40, fol. 76	Copy of letter from Cardinal Barberini to Irish clergy	25 Aug. 1668	Hand: unknown	Latin	See <i>Correspondence</i> , vol. 6, p. 425

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 40, fol. 77	Copy of letter describing attack on Major Hoare's house in Ireland; signed by Emmanuel Moore, Piercy Freake, Bryan Wade, Richard Cox	18 Feb. 1680	Hand: ?B	English	See <i>Correspondence</i> , vol. 6, p. 425
BP 40, fols. 78–9	Report on relief of Limerick, written in wartime (1649/50 or 1689/90?) by English officer	Late 17th century	Hand: unknown	English	
BP 40, fols. 80–1	Papers relating to the administration of the estate of Oldenburg	1677	Hand: two sections in different hands, the second signed by Richard Lloyd	English	Published by A.R. and M.B. Hall in <i>NRRS</i> , 18 (1963), 99–100
BP 40, fols. 82–3	Letter from Senate of Bremen to Henry Oldenburg	22 Sept. 1654	Original letter.	English	Published from copy in Bremen archives in <i>Oldenburg</i> , vol. 1, pp. 44–7
BP 40, fols. 84–5	Notarial French draft concerning property of D.E. Marchand	1678	Hand: unknown	French	
BP 40, fols. 86–7	List of paintings in Italian	Late 17th century	Fol. 87 blank except for endorsement Hand: unknown	Italian	
BP 40, fols. 88–9	Copy of Latin letters from Berlin	9 Jan. 1655	Scribal hand	Latin	
BP 40, fol. 90	Completed printed certificate appointing Benjamin Sangar to the cure of the parish of Ealing; signed R. Newcourt	31 Oct. 1670		English	



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 40, fol. 91	The Asterism to Boyle	24 Feb. and 7 March 1678 NS: i.e., 14 and 25 Feb. 1678 OS	Original letter	Latin	Published in <i>Correspondence</i> , vol. 5, pp. 38–42
BP 40, fol. 92	Letter from Cressy Dimoke (Dymock) to ‘your Grace’ concerning his inventions	16 Jan. 1678	Hand: ?Holograph	English	See <i>Correspondence</i> , vol. 6, p. 425
BP 40, fols. 93–9	Vindication of Bishop Peter Talbot, Irish Jesuit, against the calumnies of Peter Walsh; ‘Written By a Pastor of the Diocess of Dublin’	Late 17th century	Hand: unknown	English	
BP 40, fols. 100–9	Account of the trial of those accused of bewitching Sir George Maxwell of Pollok, 18 January 1678	Late 17th century	Clerical copy	English	See M. Hunter, <i>The Occult Laboratory</i> (Woodbridge, 2001), p. 3
BP 40, fols. 110–37	Depositions, verdict and sentence against Alexander Drummond for witchcraft, also signed Robert Martin, Edinburgh, 1629	1629	Clerical copy	English	See Christina Lerner, Christopher Hyde Lee and H.V. McLachlan, <i>A Source-Book of Scottish Witchcraft</i> (Glasgow, 1977), p. 11
BP 40, fols. 138–9	Notes of arrears of quitrent in Ireland by the Treasury Commissioners for Ireland	24 Aug. 1674	Hand: unknown	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 40, fols. 140–2	Document alleging that Irish troubles are due to Catholic Church and suggesting countermeasures	1681	Date apparently 1681 (see fol. 141) Hand: Bacon	English	
BP 40, fols. 143–4	[Sir William Petty] Scheme for regenerating Ireland in nine years	August 1675	Hand: Bacon	English	See various copies in British Library, Add. MS 72789, fols. 84–97
BP 40, fol. 145	Part of patent of Company for Propagation of Gospel in New England and adjacent parts of America	[1662]	Hand: unknown	English	Cf. BP 4, fols. 123–6
BP 40, fols. 146–7	‘An Abstract of the Patent of the Corporation for New England’	[1662]	Hand: unknown	English	Cf. BP 4, fols. 123–6
BP 40, fols. 148–51	‘Reflections upon the present State of Affairs in Poland, Turkey, & Tartary ...’: means of improving them to the benefit of England and the plantations in the West Indies	Late 17th century	Hand: unknown	English	
BP 40, fols. 152–3	Portrait of Simon de Montfort, with French text	Late 17th century	Hand: unknown	French	

Ref.	Title	Date	Description	Language	Related material
BP 41, fols. 1–21	John Birchensha, ‘A Compendious Discourse of the Principles of the Practicall & Mathematicall Partes of Musick’	[1664]	?Holograph	English	See Penelope Gouk, <i>Music, Science and Natural Magic in Seventeenth-century England</i> (New Haven and London, 1999), pp. 188, 281; L.E. Miller, ‘John Birchensha and the Early Royal Society’, <i>Journal of the Royal Musical Association</i> , 115 (1990), 63–79
BP 41, fols. 22–31	Letter from John Wallis to Oldenburg on musical topics	14 May 1664	Preceded by sheet with calculations on verso. Some variants from published text Holograph	English	Published from a different copy in <i>Oldenburg</i> , vol. 2, pp. 190–201
BP 41, fols. 32–6	Extracts from Italian work(s) on natural philosophy, including Torricelli, etc.	1670s–1680s	Hands: Bacon, Smith	Italian	
BP 41, fols. 37–8	Chapter 8 of an unknown Latin treatise on metals	1670s–1680s	Contains instructions on how to use a table (not present) for determining weight and size of metals Hand: Bacon	Latin	
BP 41, fols. 39–43	Latin theological papers	1670s–1680s	Fols. 39v-40 blank Hands: Bacon, Smith	Latin	
BP 41, fols. 44–9	Mathematical papers, dealing with calculation of fractions, equations, geometrical definitions, etc.	1670s–1680s	Hands: Bacon, Greg, ?	English	

Ref.	Title	Date	Description	Language	Related material
BP 41, fol. 50	Extract from an experimental discourse concerning weights	1660s	Hand: K	English	
BP 41, fol. 51	‘A Scheme of the notes about Sensation in generall’	1660s	Hand: F	English	See also BP 10, fol. 48v
BP 41, fol. 52	‘Nullum periculum sine periculo nuncendum [?] est’	17th century	Latin paper, signed T.L.[?] Hand: unknown	Latin	
BP 41, fol. 53	Calendrical notes/calculations	1670s–1680s	Hand: Bacon	English	
BP 41, fol. 54	Untitled series of 41 Latin propositions relating to hydrostatics	1680s	Hand: Greg	Latin	
BP 41, fol. 55	Introduction in French to series of rules ‘pour decouvrir la verite’	Late 17th century	Hand: unknown	French	
BP 41, fols. 56–63	Latin material concerning Raymond Lull (incomplete at end)	17th century	Hand: uncertain	Latin	From C. de Bouelles, <i>Epistola in Vitam Raemundi Lullii Eremitae</i> (1511); <i>Vita Raymundi Lullii</i> (1604)
BP 41, fols. 64–7	‘De Suffixis’	Late 1640s or early 1650s	Incomplete Latin text concerning biblical languages and other related material Hand: early Boyle	Latin	
BP 41, fols. 68–9	MS of laudatory poem by ‘S.F., an English noblewoman’, published in <i>Notion of Nature</i>	c. 1686–1687	Published in the Latin edition (London, 1687) translated by David Abercromby Hand: M	Latin	<i>Works</i> , vol. 10, pp. 577–81

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 41, fols. 70–2	Recipes ‘pour faire croistre une Salade dans l’espace de 2 ou 3 heures’ and for smoking liquors	1670s–1680s	Hands: ?, Smith	French	
BP 41, fols. 73–6	‘De Mutatione Vocis’; tables and notes concerning Hebrew punctuation, etc.	Mid 18th century	Two copies Hands: Miles, ?	Latin	
BP 41, fols. 77–80	Verses addressed ‘A Monseigneur le Comte de St. Alban’; ‘Sonnet par le meme Sur la Retraite des Holandois’; ‘Epigramme Au Roy’	Late 17th century	Hand: E	French	
BP 41, fols. 81–2	French verses	Late 17th century	Hand: unknown	French	
BP 41, fol. 83	‘The permitted speech ascending out of the ground as the King was entering into the Parliament [?]’	Late 17th century	Hand: unknown.	English	
BP 41, fol. 84	Poems: ‘On the two giants in Guildhall, London’ and ‘On the burning of the Pope in London. Nov 17. [16]77’	1677	Hand: unknown	English	
BP 41, fols. 85–6	Verse satire on English politicians/courtiers.	Late 17th century	Hand: unknown.	English	
BP 41, fols. 87–8	Verse prophecy	Late 17th century	Hand: Warr	English	



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 41, fols. 89–90	Poem in form of alleged autobiography of an Irish dog	Late 17th century	Hand: unknown	English	
BP 41, fols. 91–2	‘On the Letter O’, a poem	Late 17th century	Hand: unknown	English	
BP 41, fols. 93–4	Poem on Charles I’s execution	Late 17th century	Hand: unknown.	English	
BP 41, fol. 95	‘An epitaph upon the untymely Life and death of R.K. lately or not at all deceased’	Late 17th century	Hand: unknown	English	
BP 41, fol. 96	‘Extrait d’une lettre ecrite de Londres le 14/24 fevrier 1687/8 par un Bourgeois de Londre Quacker’	1688	Hand: unknown	French	
BP 41, fols. 97–9	Two copies of ‘A part of a Prophecy in M. S. in my Lord Powes [Powis]’s family above sixty years’	1670s–1680s	Hand: Bacon	English	See also BP 42, fols. 254–5
BP 41, fols. 100–3	Verses ‘On Mr. William Erberye deceased’ and ‘On Mr. Westron[?] deceased’	Mid 17th century	Hand: unknown.	English	
BP 41, fols. 104–12	Letters and papers concerning cryptographic codes, etc., including some dated 1669	Late 17th century	Mainly dealing with political/diplomatic matters Hand(s): unknown	English	
BP 41, fol. 113	Notes on dates of death of members of the Rich family	Late 17th century	Hand: unknown	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 41, fol. 114	Note on seals allegedly engraved by a man aged 180	Late 17th century	Hand: unknown	English	
BP 41, fol. 115	‘De Rege et Senatu’ (Latin verses)	Late 17th century	Hand: unknown	Latin	
BP 41, fols. 116–17	A prescription for Boyle	Late 17th century	Fol. 117 blank Hand: unknown	English	
BP 14, fol. 118	‘T. Germans Prognostication, put in Latine by P. Claveus’	Late 17th century	Hand: unknown	Latin	
BP 41, fols. 119–22	Speech before execution and letters of ‘J.A.’	1683–1684	i.e., John Ayloffe, implicated in the Rye House Plot Hands: Warr, C	English	
BP 41, fol. 123	Certificate by Thomas Ramsay discharging Boyle from debts and thanking him for his ‘liberality and patronage’	24 Aug. 1686	Hand: Ramsay	English	
BP 41, fol. 124	Note of observation by traveller	Late 17th century	Hand: uncertain	English	Published on pp. 167–8, above
BP 41, fol. 125	Extract from Italian letter from Genoa dealing with French galleys	12 Nov. 1679	Hand: unknown	Italian	
BP 41, fols. 126–7	Copy of instructions to children by Earl of Arundel	14 Sept. 1646	Fol. 127 blank except for endorsement Hand: unknown	English	

Ref.	Title	Date	Description	Language	Related material
BP 41, fols. 128–48	Papers relating to Trinity College, Dublin, including regulations for students, financial calculations and notes, and lists of benefices and properties of College	Late 17th century	Hand: unknown	English	
BP 41, fols. 149–50	Tables of barometric readings and weather observations, apparently carried out at York, December 1682 and January 1682[3?]	1682 – 1683	Hand: uncertain	English	
BP 41, fol. 151	Drawing of lamp.	Late 17th century		English	
BP 41, fol. 152	Drawing of carriage evidently connected with experiments on carriage design carried out by Royal Society in 1664, with captions in hand of Thomas Blount	1664		English	Cf. M. Hunter, <i>Establishing the New Science</i> (Woodbridge, 1989), pp. 88–9
BP 41, fol. 153	Engraving by Gerard Vandergucht	Early 18th century		English	Duplicate of BP 35, fols. 215–18
BP 41, fol. 154	Oldenburg’s copy of drawing of coal-pit by Henry Power	1662	Cf. Birch, <i>Royal Society</i> , vol. 1, p. 136 and plate 2, and above, BP 21, pp. 129–32 Hand: Oldenburg	English	
BP 41, fol. 157	Modern cover sheet	20th century	Fols. 155–6 missing	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 41, fols. 158–84	Unpublished Latin translation of parts of <i>Producibleness</i>	1680s	Part II, sections I-IV (incomplete), and part I, section IV Hand: Ramsay	Latin	<i>Works</i> , vol. 9, pp. 47–66

Volume 42  
Quarto-size volume; foliated; 277 pages. 19th-century contents leaf: Miscellaneous.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 42, fols. 1–17	‘Pensees pieuses’: religious thoughts and reflections in French, in imitation of Pascal, possibly translated from English	Late 17th century	Hand: unknown	French	
BP 42, fols. 18–79	‘Pensées meslées’, Parts III, V and II (covering nos. 64–107, 140–52) of another imitation of Pascal comprising brief theological notes	Late 17th century	Hand: unknown	French	
BP 42, fols. 80–4	List of contents of ‘La vera pratica della Divina Sapienza o veto Magia Anticha Scripta da Abrahamo di Simone’.	1670s–1680s	Hand: Bacon	Italian	
BP 42, fols. 85–104	‘Philosophia Chaldaica’: text and tables of ‘Alphabetum accidentale’	1670s–1680s	Hand: Bacon	Latin	
BP 42, fols. 105–10	‘The Historie of Susanna’: poem, with dedication signed ‘Tho[mas] Harper’	Early 17th century	Apparently unpublished Hand: unknown	English	

Ref.	Title	Date	Description	Language	Related material
BP 42, fols. 111–14	Copies of assorted love poems by Robert Herrick and Thomas Carew	17th century	Hand: unknown	English	
BP 42, fols. 115–7	Thomas Carew, ‘A Rapture’	17th century	Hand: unknown	English	
BP 42, fols. 118–53	MS text, dated 1624, of <i>The True History of the Tragick Loves of Hipolito and Isabella Neapolitans, Englished</i>	17th century	With notes on religious topics on fol. 153v Hands: unknown (two hands)	English	<i>The True History of the Tragick Loves of Hipolito and Isabella Neapolitans, Englished</i> (1628)
BP 42, fol. 154	Cover sheet with notes probably referring to City business on verso	Late 17th century	Hand: unknown	English	
BP 42, fols. 155–82	‘Le Philosophe Duppe’	Late 17th century	Anonymous French comedy (incomplete) apparently unpublished (not the same as Saint Foix, <i>Le Philosophe Dupe de l’Amour</i> (Paris, 1727)) Hand: unknown	French	
BP 42, fols. 183–213	Miscellaneous Latin and Greek poems, notes, anagrams, etc., together with list of books, mainly classical (fol. 197), instructions for taking notes when reading (fol. 212v), dedicatory inscription to John Warr from Joseph Crabb, 2(?) Sept. 1686 (fol. 213)	Late 17th century	Evidently the remains of a commonplace book, probably of John Warr senior Hands: Warr sen, ?	Latin, Greek, English	



Ref.	Title	Date	Description	Language	Related material
BP 42, fols. 214–15	News of Battle of Southwold Bay	28 May 1672	Scribal hand	English	
BP 42, fols. 216–19	Recipes in French	Late 17th century	Hand: unknown	French	
BP 42, fol. 220	Account of trick involving silver coins	c. 1680	Hand: C	English	
BP 42, fol. 221	Form of royal letter of protection	Late 17th century	Scribal hand	English	
BP 42, fol. 222	Quotation from Aristotle's <i>De Caelo</i>	1680s	Hand: Greg	Latin	
BP 42, fols. 223–4	Extract from book	Late 17th century	Fol. 224 blank except for endorsement Hand: uncertain	Latin	
BP 42, fol. 225	Verses on determining weights	1680s	Hand: Greg	English	
BP 42, fol. 226	Extract from Nostradamus	Late 17th century	Date of original c. 1550 Hand: uncertain	Latin	
BP 42, fol. 227	'Under Portsmouths Picture'	Early 1680s	Attack on Louise de Keroualle, Duchess of Portsmouth Hand: ?C	English	
BP 42, fol. 228–49	Dismembered notebook of Henry Miles, including collection of English and Latin phrases	1708–1710	Inscribed on fol. 229: 'Henry Miles His Book' Hand: Miles	English, Latin	

Ref.	Title	Date	Description	Language	Related material
BP 42, fols. 250–3	Notes on astronomical theories including those of Copernicus and Tycho Brahe	1660s–1670s	Fols. 252–3 blank Hand: Oldenburg	English	
BP 42, fols. 254–5	‘Part of a Prophecy in MS in my Lord Powes’s family above sixty years’	1670s–1680s	Hand: Bacon	English	See also BP 41, fols. 97–9
BP 42, fol. 255X	List of headings/topics, possibly for treatises	1680s	Hand: Greg	English	
BP 42, fols. 256–63	Historical account of the Polish town of Lesna	Late 17th century	Hand: unknown	Latin	
BP 42, fols. 264–77	Papers detailing Scottish grievances against royal government	1674	Incomplete, and misbound Hand: unknown	English	

Volume 43  
Quarto-size volume; foliated; 398 pages. 19th-century contents leaf: Miscellaneous.

Ref.	Title	Date	Description	Language	Related material
BP 43, fols. 1–154	Excerpts from <i>De Republica Ecclesiastica</i> by Marc Antonio de Dominis, Archbishop of Spalato [Split]	Late 17th century	Books iv–vii and ix. Interpolated by ‘Observations quaedem Oxonii receptae Anno 1645’ (fols. 23–31) and extract from Samuel Daniel’s <i>Archiepiscopal Priority Instituted by Christ</i> (1642) (fol. 32). Hand: ? Oldenburg	Latin, English	Marc Antonio de Dominis, <i>De Republica Ecclesiastica</i> (London, 1617)
BP 43, fols. 155–212	‘Collegium privatum Antijudaicum’	c. 1641	Latin theological notes dervied from Voetius, Latin mainly in form of summaries but with longer sections of text (in smaller format) on fols. 164–6 and 184–7. The date 22 Sept. 1641 appears on fol. 155. Hand: ? Oldenburg	Latin	

Ref.	Title	Date	Description	Language	Related material
BP 43, fols. 213–17	Extracts from Varenius’ <i>Geography</i> and Gassendi’s <i>Institutio Astronomica</i>	Late 17th century	Hand: Oldenburg	Latin	Bernhardus Varenius, <i>Geography</i> (1650); Pierre Gassendi, <i>Institutio Astronomica</i> (1647)
BP 43, fols. 217–18	Historical notes	Late 17th century	Hand: ? Oldenburg	Latin	
BP 43, fols. 220–35	Notes on Isaac de la Peyrère, <i>Prae-Adamitae</i> (1655) and Samuel Maresius [i.e. Desmarets], <i>Refutatio Fabulae Prae-Adamiticae</i> (1655)	Late 17th century	Fols. 234–5 blank century	Latin Hand: ? Oldenburg	
BP 43, fols. 236–59	‘Raisons contre la Paix des Hollandois de l’an 1647’, etc.	Late 17th century	Copies of diplomatic texts Hand: ? Oldenburg	French, English	
BP 43, fols. 260–5	‘Methodus legendi Historias’	Late 17th century	Text on the discipline of history, its types, etc., evidently derived from Degory Wheare’s <i>De Ratione et Methodo legendi utraque Historias Civiles et Ecclesiasticas</i> (1623) Hand: Oldenburg	Latin	
BP 43, fols. 266–79	Notes on Dutch history	Late 17th century	Hand: Oldenburg	English	
BP 43, fols. 280–9	Notes on fortification	Late 17th century	Hand: ? Oldenburg	Dutch?, French	

Ref.	Title	Date	Description	Language	Related material
BP 43, fols. 290–7	Notes on sermons by Fifth Monarchists including John Simpson and Wentworth Day	? 1655	Hand: Oldenburg	English	See J.R.Jacob, <i>Robert Boyle and the English Revolution</i> (New York, 1977), pp. 128–9
BP 43, fols. 298–301	Charles I’s reply to Parliament and the Scots Commissioners, May 1647	Late 17th century	Fol. 301 blank Hand: uncertain	English	
BP 43, fols. 302–22	Two overlapping copies of history of English kings from 1066	Late 17th century	Fol. 322 blank Hand: ?Oldenburg	English	
BP 43, fols. 323–32	‘The State of Britanie [sic] from the time of the Romans unto William the Conqueror’	Late 17th century	Account of British history from 55 BC to AD 1100 Hand: Oldenburg	English	
BP 43, fols. 333–6	‘Considerations on Deuter[onamy] 18: 9–21’	Late 17th century	Hand: ?Oldenburg	English	
BP 43, fols. 337–45	MS copy of ‘Thomas Hobbes’ Latin poem <i>De Mirabilibus Pecci</i>	? 1670s	Hand: Oldenburg	Latin	Thomas Hobbes, <i>De Mirabilibus Pecci</i> (London, 1678)
BP 43, fols. 346–9	Latin satirical synopsis of the life of Cardinal Richelieu	Late 17th century	Fol. 349 blank Hand: ?Oldenburg	Latin	
BP 43, fols. 350–64	‘A proposition for advancement of Morality, By a new way of entertainment of the people’	1654	Copy of pamphlet by Sir William Davenant Imperfect at end Hand: unknown	English	See J.R. Jacob and Tim Raylor, ‘Opera and Obedience’, <i>The Seventeenth Century</i> , 6 (1991), 205–50

Ref.	Title	Date	Description	Language	Related material
BP 43, fol. 365	‘Argumentum Pharsaliae’	Late 17th century	Brief account of the military and political events in Rome, 55–47 BC, evidently from Lucan Hand: ?Oldenburg	Latin	
BP 43, fol. 366	Notes on algebra.	Late 17th century	Hand: Oldenburg	English	
BP 43, fols. 367–96	French translation by François Guillot of Juan Huarte’s <i>Examen de Ingenios para las Ciencias</i>	Late 17th century	Hand: ? Oldenburg	French	Juan Huarte, <i>Examen de Ingenios para las Ciencias</i> (1575)
BP 43, fols. 397–8	‘Le proces de Lucas Scacs de faire un bon Aurum potable’	Late 17th century	Hand: uncertain	French	

Volume 44  
Quarto-size volume; foliated; 170 pages. 19th-century contents leaf: Miscellaneous.

Ref.	Title	Date	Description	Language	Related material
BP 44, fols. 1–20	Transcript of Eirenaeus Philalethes, <i>De Metallorum Metamorphosi</i>	Late 17th century	Published in Amsterdam, 1668, though this copy is probably from a MS recension rather than the published edition Scribal italic	Latin	Eirenaeus Philalethes, <i>De Metallorum Metamorphosi</i> (1668)
BP 44, fols. 21–2	Extract from letter from Johann Morian (concerning Hartlib)	28 Oct. 1658	Hand: scribal	Latin	Published on Hartlib CD-ROM



Ref.	Title	Date	Description	Language	Related material
BP 44, fols. 23–28	John Wallis’ comments on <i>Usefulness</i> , together with observation concerning numbness	[1663]	Sent with letter from Wallis to Boyle dated 10 September 1663. Fol. 28 blank Hand: John Wallis	English	Published in <i>Correspondence</i> , vol. 2, pp. 112–19
BP 44, fols. 29–30	Observations in French on natural philosophers, including Boyle, by a critic	1670s–1680s	Hand: Bacon	French	
BP 44, fols. 31–2	Mathematical calculations and notes	1660s	Hand: E	English	
BP 44, fols. 33–5	Diagrams and associated notes, some evidently astrological	Late 17th century	Hand: unknown	English	
BP 44, fols. 36–42	Brief notes on biblical passages, including some from a commentary by John Preston	Late 17th century	Hand: Warr sen	English	
BP 44, fols. 43–9	[Workdiary 27]	Late 1660s	Chymical notes and aphorisms from a disbound notebook Hand: Boyle	English	Workdiary 27
BP 44, fol. 50	Latin notes on a remedy	Late 17th century	Hand: unknown	Latin	
BP 44, fols. 51–4	‘Annotationes In Aristotelicam naturae definitionem’	Late 1680s	Latin comments on section IV of <i>Notion of Nature</i> , taking exception to Boyle’s interpretation of Aristotelian axioms, by an anonymous French Aristotelian Hand: unknown	Latin	See <i>Works</i> , vol. 10

Ref.	Title	Date	Description	Language	Related material
BP 44, fol. 55	Apparently an introductory invocation to a treatise on a secret process, with, on verso, six seals, endorsed ‘ARCana Arcane custodito’	Late 17th century	Hand: unknown	Latin	Perhaps addressed to Boyle. See Principe, <i>Aspiring Adept</i> , p. 115
BP 44, fols. 56–93	Extracts from ‘Testamenti Novissimi Raymundi Lullii, Maioricani, Regi Carolo Dicati’	Late 17th century	Hand: ?Clodius	Latin	<i>Testamentum Raymundi Lulli Doctissimi et Celeberrimi Philosophi</i> (1573)
BP 44, fols. 94–107	‘Diurnall Observations, Thoughts, & Collections. Begun at Stalbridge April 25th 1647’ [Workdiary 1]	1647	Aphorisms, etc., in English and French Hand: early Boyle	English, French	Workdiary 1 Mainly from Gaultier de Costes’s romance, <i>Cassandre</i> (1642)
BP 44, fols. 108–13	[Workdiary 2]	1647	Aphorisms in French. Fol. 113 blank Hand: early Boyle	French	Workdiary 2 Mainly from book 1 of Gaultier de Costes’s romance, <i>Cassandre</i> (1642)
BP 44, fols. 114–16	[Workdiary 3]	1647	Aphorisms is English, preceded by the heading ‘L.D.’ Fol. 116 blank Hand: early Boyle	English	Workdiary 3
BP 44, fols. 117–26	‘The Journall and Relation of a New discovery made behind the Apuleian [Appalachian] Mountains to the West of Virginia’	Sept. 1671	By Thomas Batts, Thomas Woods and Robert Fallam Hand: uncertain	English	See E. and D.S. Berkeley (eds.), <i>The Reverend John Clayton</i> Charlottesville, Va., 1965), pp. 68–77 (similar, but not identical, text, from British Library MS Sloane 4432, fol. 9). See also A.V. Briceland, <i>Westward from Virginia</i> (Charlottesville, 1987), pp. 124–46, and R.P. Stearns, <i>Science in the British Colonies of America</i> (Urbana, 1970), p. 190 and n. 53

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 44, fols. 127–32	Start of commentary on BP 44, fols. 117–26, continuing in BP 39, fols. 95ff	Late 17th century	Hand: uncertain	English	
BP 44, fols. 133–70	‘A Defence of the late Voyage into Portugall attempted by the English Nation, agaynst the secret whysperinges of certain disloyall subiectes’	Late 17th century	Defence of English expedition to Lisbon, probably 1589; author unknown: dedicated ‘To the right honorable the Erle of Essex his very good Lord’. Fol. 170 blank except for endorsement. Secretary hand	English	

Volume 45

Quarto-size volume; foliated; 123 pages. 19th-century contents leaf: Miscellaneous.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 45, fols. 1–123	Translation of seven Orations by Cicero, preceded by contents leaf and ‘The Judgement of M. Fab. Quintilianus concerning Cicero. Lib 10. Institut. Orat. c.1’ (fol. 2).	Late 17th century	Licensed by Edward Cooke, 7 June 1693, on fol. 3 Hand: Warr sen	English	

Ref.	Title	Date	Description	Language	Related material
BP 46, fol. 1	Leaf with connecting passage in hand of Warr and pasted-in note by Miles	1670s–1680s; 18th century	Hands: Warr, Miles	English	
BP 46, fol. 2	Passage on human honours and real virtue	c. 1680	Hand: C	English	
BP 46, fols. 3–5	Superseded version of part of <i>Notion of Nature</i>	c. 1680	Section VI (on crises). Only two sentences printed, the rest rewritten. Probably loose leaves from a notebook Hand: B	English	See <i>Works</i> , vol. 10, p. 511 for sentences in printed text; the remainder published in <i>Works</i> , vol. 14, pp. 162–3
BP 46, fol. 6	Introductory passage to two letters, probably concerning reason and religion	c. 1680	Hand: B	English	
BP 46, fols. 7–8	MS version of part of <i>High Veneration</i>	c. 1680	First paragraph in ‘Conclusion’, with unpublished lines at the end Hand: C	English	<i>Works</i> , vol. 10, p. 199, including previously unpublished material
BP 46, fols. 8(bis) and 9–15	Sections of text concerning reason and revealed religion, and the truth of Christianity, together with part of discourse on the advantages of Christianity compared with other religions	c. 1680	Similar to but apparently not in published text of <i>Reason and Religion</i> ( <i>Works</i> , vol. 8) Hands: C, B	English	Fols. 8(bis), 9 and 12–15 published in MacIntosh, 2.1.82, 2.2.17 and 3.6.23

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BP 46, fol. 16	Draft of conclusion to previous paper, on reason's services to religion and to Christianity in particular	c. 1680	Hand: C	English	
BP 46, fol. 17	Part of draft for work on reason and religion	c. 1680	Linked to but not printed in <i>Reason and Religion (Works, vol. 8)</i> Hand: B	English	Published in MacIntosh, 3.5.12





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# The Boyle Notebooks and Associated Manuscripts

MS 10: Collection of alchemical tracts formerly owned by Sir Kenelm Digby Quarto volume; foliated; 382 folios. Bound in calf, with fleur de lys motif on front and back covers and repeated ‘KD’ motifs on spine. At the front are eight leaves that are blank except for the catalogue entry on the first recto, and there are eight further blank leaves at the end. In addition to the archival foliation, various components are separately paginated.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 10, fols. 1–176; pp. 1–352	‘Le grand oeuvre des Philosophes Par Philippe Rouillach Piedmontois Religieux de l’Ordre de St Francois d’Assise et premier Philosophe de son temps’	Early 17th century		French	
MS 10, fols. 177–213; pp. 1–67	‘Pratique du grand oeuvre des Philosophes. Par Philippe Rouillach Piedmontois’	Early 17th century	Fol. 213 blank	French	
MS 10, fols. 214–17‘	‘Teinture d’un poids sur 25 de [silver]’	Early 17th century	‘From Monsieur de la Noue’ added in margin. Fol. 217 blank	French	
MS 10, fols. 218–37; pp. 1–40	‘Le Diuin oeuvre des Philosophes’	Early 17th century	Note that treatise received from Duke of Guise. Fol. 237 blank	French	
MS 10, fols. 238–47; pp. 1–19	‘Ultimum patris ad filium Testamentum, in quo vera phisica particularia, minimè sophistica explicantur; et lapis philosophorum verbis haud ambiguis, sed claris, ac dilucidis traditur, paucis operis clavibus reservatis’	Early 17th century	‘Ex Biblioth: Francisc: Tholosae’ (in margin). Followed on fol. 247 by the title: ‘Geomantia metallica’, with the note: ‘This treatise is omitted here, because I have it coppied in an other booke’	Latin	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 10, fols. 248–57; pp. 21–39	‘Opus universale sive lapis philosophorum universalis’	Early 17th century	Fols. 256–7 (pp. 37–9) blank	Latin	
MS 10, fols. 258–65; pp. 41–56	‘Observations sur l’oeuvre Universel susdit; qu’on ne m’a jamais voulu permettre d’écrire, comme il estoit dans le livre susdit’	Early 17th century		French	
MS 10, fols. 266–81; pp. 1–32	‘Extrait d’une lettre de Neptis au Druide, sur l’Operation de la procedure de frere Phillipon communiqué par Monsieur Landrinier 1er Januier 1608’	Early 17th century	Note identifying Neptis as ‘Mdlle de Martinuille’ and the Druid as Quercetanus	French	
MS 10, fols. 282–5; pp. 33–[9]	Untitled recipe. ‘Ce procede fut donné a Mons. Richer par amy’			French	
MS 10, fols. 286–95; pp. 1–19	‘De Magisterio sive de investigatione secreti occulti’	Early 17th century	Marginal note: ‘Raymundo Lullio Authore’. Fol. 295 (p. 19) blank.	Latin	
MS 10, fols. 296–307; pp. 21–42	‘Premiere [etc., to 7e] Pratique sur la Matiere vegetable Ex Manuscripto Ray. Lullii’	Early 17th century	Fol. 307 blank	French	
MS 10, fols. 308–15; pp. 1–11	‘Dialogue d’Aaron avec Marie’	Early 17th century	‘Traduit d’une fort ancienne copie en langue Catalane Par le President Chanticlair’. Verses from the same Catalan MS added on fols. 312–13 (pp. 9–11). Fols. 314–15 blank	French, Latin, Italian	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 10, fols. 316–22	‘Copie des papiers du Maltraicté’	Early 17th century	Fol. 322 blank	French	
MS 10, fols. 323–6	‘Operation par l’esprit ou litharge Naturelle des metaux’ (fol. 323) and ‘Oeuvre sur la Calamite blanche, qui est esprit d’Argent’ (fol. 324)	Early 17th century	Fols. 325–6 blank	French	
MS 10, fols. 327–31	‘Medicine au Blanc’ (fols. 327–8) and ‘Arbre Philosophique [?] qui va en proiection’ (fols. 329–31)	Early 17th century		French	
MS 10, fols. 332–46	‘Ouvrage qui se fait par les moyens substances, A ment [?] Magistere Par La Moyere, substance Arsenic’	Early 17th century	Fols. 344–6 blank	French	
MS 10, fols. 347–69; pp. 1–46	Various recipes	Early 17th century	Note on fol. 347: ‘The following receipts, till pag. 35. are copied out of Monsieur de Candale his MS’. Source of remaining recipes not given	French	
MS 10, fols. 370–2; pp. 47–51	‘Operation sur les deux luminaries et sur le [Mercury]’	Early 17th century		French	
MS 10, fols. 373–8; pp. 53–61	‘Du cristal mineral’	Early 17th century	Fol. 378 blank	French	
MS 10, fols. 379–80	‘Pro Amico Veneto’ (verses)	Early 17th century		Latin	

Ref.	Title	Date	Description	Language	Related material
MS 10, fols. 381–2	‘Remede ou preservatif apologetique pour Appius medisant satiriquement contre le philosophe adepte’	Early 17th century		French	

**MS 22: Common place book**  
**Octavo volume; vellum-bound; paginated to p. 185; 228 pp. in total, six blank pages at end. Several leaves removed between pp. 126 and 127, and another between pp. 206 and 207.**

Ref.	Title	Date	Description	Language	Related material
	‘Excerpta made out of severall Authors. AD 1663’: extracts from travel books, medical works and books on natural philosophy	1663	A separate gathering of 14 pp. is loosely inserted in the volume, containing copies of Henry Power’s experiments in coalmines, and papers by Samuel Tuke, Theodore Haak and Daniel Colwall on Colchester oysters. Entries in main text numbered in pencil. Endorsed by Miles on cover: ‘some few Leaves of Cole pits damp &c of managing Colchester Oysters’ Hand: Clodius, except for first two and last entries, of which the first are in an uncertain hand and the last is in hand D (?)	English, Latin, French, Italian, German	For the Power text, see Birch, <i>Royal Society</i> , vol. 1, pp. 133–6 (though the figure and the key to it is here lacking). For the text on Colchester oysters, see <i>ibid.</i> , pp. 119, 127, 138 and 155 and refs. there cited



MS 23: Catalogue of John Warr's library and miscellaneous notes  
Quarto volume; vellum-bound; foliated; 69 folios. Fols. 1–60 written from front; fols. 61–9 written from back. Hand: Warr.

Ref.	Title	Date	Description	Language	Related material
MS 23, fols. 1–8	Notes, evidently on scholastic lecture on theology	c. 1690		English	
MS 23, fols. 9–56	List of books, divided by format, many of them numbered and with prices	c. 1690	One or more pages evidently missing at start; some notes on whereabouts attached, including the following headings: 'In the Closet of my Room in Brewer street. In folio' (fol. 9v) 'In the Closet of the Back Garret in Brewer street (in folio)' (ibid) 'Bound in Vellum in folio on the Shelfe the inside of Th. Smiths Bed[room]' (fol. 10v) 'Quartos. In my Roome at my Masters' (fol. 14) 'Bookes in Quarto in my Closet in the lower Room in Brewer Street' (fol. 22) 'In the upper Closet in Brewer Street in Quarto' (ibid) 'Bookes of mine in Octavo on the upper Long shelfe in my roome at my Masters' (fol. 26) 'Bookes of mine in Octavo on the upper long shelfe save one' (fol. 29) 'In the little [sic] of my Chamber at my Masters just over the door' (fol. 32) 'The following Bookes are in the Dress of Shelves by the Beds-head in my Roome at my Masters' (fol. 36)	English	Details of books published in alphabetical order in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), pp. 252–81. See also above, pp. 71–2

Ref.	Title	Date	Description	Language	Related material
			‘On the upper shelfe save one (in the press) 8vos’ (fol. 38) ‘In the Garret Closet in Brewer Street. Octavoes’ (fol. 48) ‘In the lower Shelfe save two in the press’ (ibid.) ‘Octavoes in Parchment & sticht in the upper back Closet in Brewer Street’ (fol. 56)	English	
MS 23, fols. 57–60	Notes on God’s attributes	c. 1690		English	
MS 23, fols. 61–7	Notes on words in alphabetical order	c. 1690		English	
MS 23, fols. 68v–9	Definitional notes concerning theological disputes, some from Anthony Burgess’ <i>True Doctrine of Justification</i> (1655)	c. 1690		English	

**MS 25: Medical concordance**  
**Small octavo volume; bound in contemporary calf; foliated; 82 folios.**

Ref.	Title	Date	Description	Language	Related material
	Concordance of medical data, arranged alphabetically by heading, part 1	1670s–1680s	Hand: Bacon	Latin	See MS 180

**MS 26: Medical concordance**  
**Small octavo volume; bound in contemporary calf; foliated; 89 folios.**

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
	Concordance of medical data, arranged alphabetically by heading, part 2	1670s–1680s	Fols. 83–171 of same compilation as MS 25 Hand: Bacon	Latin	See MS 181

**MS 38: ‘Clangor Buccinae’**  
**Octavo volume; vellum bound; foliated; [1] + 121 folios.**

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
	‘Clangor Buccinae: Le Son de Trompete ou du Clarion. Traicte excellent & admirable racceuilly d’une excripture fort ancienne: discourant a tous philosophes fidellement & physicalement de la Pierre des Philosophes, Mis en francois par I. Fornier. 1573.’	Late 16th–early 17th century	MS treatise	French	

**MS 40: Sermons**  
**Octavo volume; modern quarter calf. Paginated to 149; 222 pp. in total.**

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
	Series of sermons on Philippians 4. 8	1670s–1680s	Hand: unknown to p. 147, ?Warr	English	

MS 41: Medical commonplace book used by Boyle and Lady Ranelagh  
Calf-bound; recently rebacked; foliated; 96 folios. Fols. 2–6 and 93v written parallel to spine.

Ref.	Title	Date	Description	Language	Related material
	Collections of miscellaneous medicinal recipes, often with the source named	1658–1681	Informants include Mr Hollyer (fols. 7, 13), Gerard Boate (fols. 10, 28, 32v, 62), Mr Hartlib (fol. 13), Lady Barrington (fol. 18), Dr Rugely (fol. 23v), Mr Stubbe (fol. 24), Mr Green apothecary at great St Bartholomew (fol. 26), Dr Cox (fols. 29v, 50, 85v, 90–1), Dr Willis (fol. 36, 46, 85), Mr Woodward (fol. 46) Evidently used over a number of years with entries dated 1658 (fol. 3v), 1659 (fols. 6–7), 1661 (fol. 21), 1664 (fol. 36), 1665 (fol. 56), 1667 (fols. 46v, 56), 1669 (fol. 65v), 1672 (fols. 80v, 91), 1673 (fol. 85v) and 1681 (fol. 90v). Some of the material is in the hand of Lady Ranelagh, who evidently initially shared the book with Boyle; other entries are by various of Boyle’s amanuenses. Hands: Warr: fols. 2v, 17v, 19v, 57, 65, 70, 72–5, 83–5, 88v, 89–90; Lady Ranelagh: fols. 3–6, 7–12, 13v–17, 18v, 20–2, 23, 33–5, 76; Hand G: fols. 12v, 65–8; Slare: fols. 16, 70v, 77–82, 86–7; Hand E: fols. 18, 19, 23v, 35–7, 39v–40, 43–4, 45v–7, 48–51, 52v–5, 56–9, 62v, 64, 71; Clodius: fols. 25–32; Hand F: fols. 37v–9, 40v–2, 45, 47v, 60v–1; Bacon: fols. 55, 62, 87v, 89v, 90v–1; Hand K: fols. 59v–60, 63; Boyle: fol. 67 (title only); uncertain: 69 (perhaps the hand of the person who supplied the recipe)	English	

MS 43: Notebook, 1668–70

Vellum-bound; rebaked in 20th century; original front cover with title: ‘Short Notes for Entry’s; further illegible words on back cover. Written parallel to spine; foliated; 180 folios. Fols. 69v–179 blank.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 43, fols. 1–5	List of experiments	Nov.–Dec. 1668	Hands: ?, E	English	
MS 43, fols. 5v–6	Addresses of contacts and of sources where commodities available	1668–1670	Hands: G, ?	English	
MS 43, fols. 7–14	Continuation of lists of experiments, January–March [?1669]	Jan.–March [?1669]	Hand: E	English	
MS 43, fols. 15–23	Lists of experiments, September–March.	1668–1670	Hands: G, E	English	
MS 43, fols. 24–9	Further lists of experiments, April–June	1668–1670	Hand: mainly E	English	
MS 43, fol. 30	List of things to be done before visit to Leez, and other memoranda	1668–1670	Hand: mainly E	English	
MS 43, fols. 31–7	Further lists of experiments, January–April	1668–1670	Hands: E, G	English	
MS 43, fols. 38–9	Lists of experiments: 2 May. Together with list of addresses and memorandum	1668–1670	Hands: G, ?E	English	



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 43, fols. 40–4	List of experiments	1668– 1670	Fols. 43–4 blank Hand: ?G	English	
MS 43, fols. 44v–5	Experimental results, including notes on weights, November–January	1668– 1670	Hand: E	English	
MS 43, fols. 46–8	List of ‘Sir Will: Stroudes Mines’; memoranda and notes on weights	1668– 1670	Hand: E	English	
MS 43, fols. 48v–50	Records of experimental results, April–May 1669, and addresses	April–May 1669	Hand: mainly E	English	
MS 43, fols. 51–3	Notes of weights and other memoranda	1668– 1670	Fol. 53 blank Hand: mainly E	English	
MS 43, fols. 54–8	Further notes and calculations	1668– 1670	Hand: mainly E	English	
MS 43, fol. 59	Barometric observations, November–January (no year)	1668– 1670	Hand: unknown	English	
MS 43, fols. 59v–60	Further notes of weights	1668–1670	Hands: E, ?	English	
MS 43, fols. 60v–2	Notes on vibration of pendulum; further weights; and memoranda	1668– 1670	Hand: E	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 43, fols. 62v–6	Barometric observations, December–April, and notes of weights	1668–1670	Hands: E, Boyle (fol. 64v)	English	
MS 43, fols. 66v–9	Further experimental findings, some dated April 1670, and page references	1668–1670	Hands: E, ?	English	
MS 43, fols. 179v–80	‘Particulars desir’d to be observ’d or tryed by Mr Strewd’	1668–1670	Instructions for barometric observations Hand: unknown	English	

**MS 44: Boyle’s Geneva notebook**  
Octavo; vellum-bound; unfoliated, with various blank leaves and with many whole sections removed leaving only stubs of leaves, including an extensive section at the start. 109 complete folios and three folding tables.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 44 (1)	‘Table pour cognoistre depuis l’An 1640 jusques a l’An 1660 les Nombres d’Or, Cycles Solaires, Indications Romaines, Années Bissextiles, et Epactes et Lettres Dominicales’	1643	Folding table. Inserted leaf, pasted onto stub of text	French	See L. Principe, ‘Newly Discovered Boyle Documents in the Royal Society Archive’, <i>NRRS</i> , 49 (1995), 57–70, on pp. 59–63, 67–8.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 44 (2)	‘Figure qui exprime les Qualitez et Combinations &c des quatre Elements’	1643	Inserted folded leaf, pasted onto stub of text Followed by a section comprising 3 partially torn-out leaves; 2 blank leaves; stubs of a torn-out section of text; 13 blank leaves; stubs of a torn-out section of text; 9 blank leaves (one formerly a paste-down with offset), with 2 torn out in the middle; stubs of a torn-out section (some text legible); 1 blank leaf, followed by stubs of a torn-out section (some text legible)	French, English	Reproduced by L. Principe in <i>NRRS</i> , 49 (1995), 57–70, on p. 60
MS 44 (3)	‘A Figure of the Construction of the World’	1643	Folding table. Inserted leaf. Followed by 2 blank leaves	English	Reproduced by L. Principe in <i>NRRS</i> , 49 (1995), 57–70, on p. 61
MS 44 (4)	‘Diverses Pieces. Sundry Peeeces. Commencées Le Premier jour l’An 1643’	1643	2 folios. A history and geography of France. Followed by 11 blank leaves	French	
MS 44 (5)	‘De Dieu’, ‘Des Anges’ and ‘Immortalité de L’Amé’; ‘Regles et Gaillardises d’Arithmetique’, ‘Des Termes Geographiques’; ‘Of Italy’, ‘Kingdom of Naples’, ‘Milan’ and ‘Politiques’	1643	17 folios	French, English	‘Of Italy’ published by L. Principe in <i>NRRS</i> , 49 (1995), 57–70, on p. 68
MS 44 (6)	‘Theoremes Arithmetiques’, ‘Theoremes Geometriques’ (including ‘Des Lignes’, ‘Des Multilateres’, ‘Des Quadrilateres’, ‘Des Triangles’, ‘Des Cercles’) and ‘Geneva’	1643	14 folios. Followed by 11 blank leaves	French, English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 44 (7)	‘Notions communes, touchant 1643 La Fortification’, ‘Theoremes ou Maximes de la Fortification Hollandoise’, ‘De l’Air des Grandeurs En la Geodozie’, ‘En la Stereometrie’, ‘Pour former les 5 sortes de Bataillons’, ‘Problems Arithmetiques’	1643	12 folios	French	
MS 44 (8)	‘Verité’, ‘Bonté’, ‘Mesurer la Distance Itineraire entre 2 lieux proposez & ayant les Longitudes & Latitudes cognues’	1643	4 folios. Followed by 10 blank leaves	French	‘Bonté’ published by L. Principe in <i>NRRS</i> , 49 (1995), 57–70, on pp. 67–8

**MS 137: ‘On the spirit of a Man’  
Paginated; 56 pages (28 leaves); stitched, with blank leaf at start and two at end.**

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
	Theological treatise on text of 1 Thessalonians 5. 25		Dated on p. 56, ‘finitum Apr: 22: 1678’ Hand: unknown	English	

MS 138: ‘Confectio Lapidis Philosophici’

Quarto volume; vellum wrappers; paginated; 178 pages, including final blank; three blank leaves at start and two at end.

Ref.	Title	Date	Description	Language	Related material
	‘Enarratio methodica trium Geberi medicinarum in quibus continetur vera Lapidus Philosophici confectio’	7th century	Endorsed on front cover in Miles’ hand ‘Confectio Lapidis Philosoph:’ Hand: unknown	Latin	

MS 179: George Starkey laboratory notebook

Duodecimo volume; 66 leaves, unfoliated; written from both ends.

Ref.	Title	Date	Description	Language	Related material
	Laboratory notebook used by George Starkey	1654–1656	Various dates appear, from 1 March 1654/5 to 28 Aug. 1656 Hand: Starkey	Latin, English	Published in W.R. Newman and L.M. Principe (eds.), <i>George Starkey’s Alchemical Laboratory Notebooks and Correspondence</i> (Chicago, 2004), pp. 220–308

MS 180: Medical concordance

Small octavo volume; bound in contemporary calf; foliated; 86 folios

Ref.	Title	Date	Description	Language	Related material
	Concordance of medical data, arranged alphabetically by heading, part 1	1670s–1680s	Almost identical with MS 25, but comprising fols. 1–86 Hand: Bacon	Latin	See MS 25



MS 181: Medical concordance

Small octavo volume; bound in contemporary calf; foliated; 83 folios.

Ref.	Title	Date	Description	Language	Related material
	Concordance of medical data, arranged alphabetically by heading, part 2	1670s–1680s	Almost identical with MS 26, but comprising fols. 87–169 Hand: Bacon	Latin	See MS 26

MS 185: Notebook, late 1680s

Modern binding; written parallel to spine; foliated; 69 folios. Fols. 1–42 written from front; fols. 43–69 written from back; fols. 67–9 comprise stubs of torn-out pages.

Ref.	Title	Date	Description	Language	Related material
MS 185, fols. 1–3	‘Titles of Mr. [Boyle’s] Theological Tracts’ and notes on weights of spheres	Late 1680s	List on fols. 1v, 3; fol. 2 has weights of spheres Hands: Greg, ?	English	List published in <i>Works</i> , vol. 14, pp. 345–6
MS 185, fol. 4	Summary of points in a theological treatise	Late 1680s	Hand: Greg	English	
MS 185, fol. 5	‘Fragmenta Theologica Minora, or Theological Notes of my own ...’ (title page)	Late 1680s	Hand: Greg	Latin	
MS 185, fol. 6	Advertisement concerning confused state of published works	Late 1680s	Hand: Greg Fols. 7–9 blank	English	

Ref.	Title	Date	Description	Language	Related material
MS 185, fols. 10–14	Commentary on passage of Galen (fols. 10–11); introduction to section of discourse on the principal difficulties in Christianity (fols. 11v–12); and notes on propagation of Gospel (fol. 14)	Late 1680s	Fol. 13 blank Hands: Emes, Greg, Smith	English	Fol. 11v published in MacIntosh, 4.4.2
MS 185, fols. 15–16	MS version of introduction to second edition of <i>Human Blood</i>	c. 1686	‘I had about two years ago publisht my Memoirs about the history of human blood ...’. Copied in BP 18, fol. 11 Hand: Smith	English	See <i>Works</i> , vol. 10 See also BP 18, fol. 11. and Hunter & Knight, <i>Human Blood</i> , pp. ix, 1–2
MS 185, fol. 18	Part of a sentence only	Late 1680s	Hand: Smith	English	
MS 185, fols. 19–20	Section of text on the nature of light	Late 1680s	Hand: Smith	English	
MS 185, fols. 21–4	Unpublished remarks on the medical uses of distillation	1686 or later	Probably intended for sequel to <i>Medicina Hydrostatica</i> . Hand: Smith	English	See <i>Works</i> , vols. 11, 14
MS 185, fols. 25v–8	Arguments used to demonstrate truth or otherwise of religion	Late 1680s	Hand: Smith	English	Copied in BP 7, fols. 118–19
MS 185, fols. 29–32	MS material for intended appendix to <i>Final Causes</i>	1686 or later	Most copied out on BP 9, fols. 35–42. Endorsed: ‘Tbd to the end’ Hand: Smith	English	Published in <i>Works</i> , vol. 14, pp. 167–9 Also published in MacIntosh, 2.2.34

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 185, fols. 32v–7	On degrees and kinds of knowledge of natural beings (fols. 32v–4), the perfect knowledge and understanding possessed by God, and the various degrees of it which he gave to his creatures (fols. 35v–7)	Late 1680s	Hand: Smith	English	See BP 8, fols. 184–7
MS 185, fols. 38v–40	‘Advertisement’ to an unpublished essay ‘written many years since’, to show that light’s ‘origine is mechanical’	c. 1686	Apparently intended for unpublished <i>Mechanical Production of Light</i> Hand: Smith	English	Published in <i>Works</i> , vol. 14, pp. xiii–xiv
MS 185, fols. 41–2	The nature of the eye	Late 1680s	Fol. 42 blank. End of section written from front Hand: Smith	English	
MS 185, fol. 43	Structure of hypotheses, and their division into general and particular	Late 1680s	Hand: Smith	English	
MS 185, fols. 44v–6	MS version of parts of <i>Christ. Virt., I.</i>	1686 or later	Final two sentences of paragraph XXII and all of paragraph XXIII in ‘Reflections’ Hand: Smith	English	<i>Works</i> , vol. 11, pp. 341–2
MS 185, fol. 47v	Paragraph on arguments from God’s perfection	1686 or later	Perhaps originally intended for the end of paragraph XXII of ‘Reflections’ ( <i>Christ. Virt., I</i> ) (see <i>Works</i> , vol. 11, p. 341) Hand: Smith	English	Published in MacIntosh, 2.1.38
MS 185, fol. 48	MS version of part of <i>Christ. Virt., I</i>	1686 or later	Original version of paragraph XXVIII of ‘Reflections’ Hand: Smith	English	<i>Works</i> , vol. 11, pp. 343–4 Fol. 48v published in MacIntosh, 2.1.39

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 185, fols. 49–50	MS version of parts of <i>Christ. Virt., I</i>	1686 or later	Original version of paragraph V (fol. 50) of ‘Reflections’, followed by unpublished transitional paragraph (fol. 49) Hand: Smith	English	<i>Works</i> , vol. 11, p. 334, including previously unpublished material
MS 185, fols. 51–3	Material relating to <i>Christ. Virt., I</i>	1686 or later	Unpublished paragraph on incomprehensible truths; may be a discarded text related to ‘Reflections’ (previous pages all MS versions of this work) Hand: Smith	English	See <i>Works</i> , vol. 11, pp. 329–44
MS 185, fol. 54v	Passage of text on works written in dialogue form	Late 1680s	Hand: Smith	English	
MS 185, fol. 55	Material relating to <i>Christ. Virt., I</i>	1686 or later	‘The Propertys, Signs & Effects of Greatness of Mind are chiefly these’. List of virtues, perhaps related to ‘The Heads of the Discourse’, also called ‘fifth fragment’, in ‘Greatness’ Hand: Smith	English	See <i>Works</i> , vol. 11, p. 365
MS 185, fols. 55v, 55X	Introductory remarks concerning types of notes used by author	Late 1680s	Hand: Smith	English	
MS 185, fol. 56	‘Tryals to be made on humane blood’, apparently for second edition of <i>Human Blood</i>	c. 1686	Hand: Smith	English	Published in Hunter & Knight, <i>Human Blood</i> , p. 31 See also MS 189, fol. 149
MS 185, fol. 57	Directions for letters to Vienna	Late 1680s	Hand: Greg	English	

Ref.	Title	Date	Description	Language	Related material
MS 185, fols. 58–61	MS version of parts of <i>Christ. Virt., I, Appendix</i>	1686 or later	Summaries for first conference (with an extra proposition, crossed out), second conference (missing fourth answer), third conference, and fourth conference (missing fourth answer) Hand: Greg	English	<i>Works</i> , vol. 12, pp. 379–80, 381, 402, 421
MS 185, fols. 62v–3	Advertisement about the Marginal Additions of the Writer	Late 1680s	Hand: Greg	English	
MS 185, fol. 63v	‘Of two Distinctions of <i>Hypotheses</i> ’	Late 1680s	Hand: Greg	English	
MS 185, fols. 64–6	Part of introduction to sequel on <i>materia medica</i> and note on use of a preamble	1686 or later	Related to <i>Medicina Hydrostatica</i> Hand: Greg	English	See <i>Works</i> , vols. 11, 14

**MS 186: Notebook, c. 1690**  
**Modern binding; written parallel to spine; foliated; 189 folios. Fols. 1–139 written from front; fols. 140–89 written from back.**

Ref.	Title	Date	Description	Language	Related material
MS 186, fols. 1v–3v	Key to abbreviation	c. 1690	Hand: Bacon	English	
MS 186, fols. 4–5	List in French of errata in English edition of <i>Medicina Hydrostatica</i>	c. 1690	Fol. 5 blank Hand: Bacon	French	See <i>Works</i> , vol. 11
MS 186, fol. 6v	Names of South Sea, Scottish and Indian herbs	c. 1690	Hand: Bacon	English	



Ref.	Title	Date	Description	Language	Related material
MS 186, fol. 7	Notes on shortcomings of chemists	c. 1690	Hand: Bacon	English	
MS 186, fol. 8	MS version of part of <i>Christ. Virt., II</i>	c. 1690	Proposition I, section II, subsection 1, article III, paragraph 14 and the start of paragraph 15 Hand: Greg, corr. by Boyle	English	<i>Works</i> , vol. 12, p. 461
MS 186, fol. 9	MS version of part of <i>Christ. Virt., II</i>	c. 1690	Proposition I, section II, subsection 1, article IV, paragraph 2 Hand: Bacon, corr. by Boyle	English	<i>Works</i> , vol. 12, p. 466
MS 186, fols. 9v–12	Excerpt from preface or conclusion and Advertisement to planned appendix for <i>Mechanical Qualities</i> , arguing for the mechanical origin of flame and stating hope that notes on flame and light should be published	c. 1690	Apparently intended for unpublished <i>Mechanical Origin of Flame and Mechanical Production of Light</i> Hand: Bacon, corr. by Boyle	English	See <i>Works</i> , vol. 14 See also MS 187, fol. 136v
MS 186, fols. 13–14	Two advertisements, perhaps for <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Hand: Bacon, marginal addn by C	English	See <i>Works</i> , vol. 11
MS 186, fols. 14v–15	Unpublished passage on medicines for the poor, for Boyle’s essay on parable medicines	c. 1690	Hands: Smith, Bacon	English	
MS 186, fol. 16	Verses on the contents of 14 collections of papers	c. 1690	Hand: Bacon	English	

Ref.	Title	Date	Description	Language	Related material
MS 186, fols. 16v–19	On three ‘classes’ of experiment	c. 1690	Hand: Bacon	English	
MS 186, fols. 19v–20	Tasks recommended to ‘Trallianus’	c. 1690	Hand: Bacon	English	Published in B. Kaplan, ‘ <i>Divulging of Useful Truths in Physick</i> ’ (Baltimore, 1993), pp. 152–3
MS 186, fols. 21v–4	Proof of God’s wisdom in fabric of human body	c. 1690	Hand: Bacon	English	
MS 186, fols. 24v–5	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Chapter V, scholium, first paragraph only. Fol. 26 blank Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 412–13
MS 186, fols. 26v–8	An Index of the Chapters of the Experimenta & Observaciones Physicae	c. 1690	List of chapter heads, including unpublished portions Hand: Bacon	English	See <i>Works</i> , vol. 11, and above, p. 187
MS 186, fols. 28v–30	Good uses of proven experiments	c. 1690	Hand: Bacon	English	
MS 186, fols. 30v–1	List of phenomena, mostly chemical	c. 1690	Hand: Greg	English	
MS 186, fol. 32	List of supernatural phenomena, evidently for second part of ‘Strange Reports’	c. 1690	Hand: Greg	English	Published in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), p. 229
MS 186, fols. 33v–4	List of Boyle’s unpublished writings	? 1691	Cf. BP 36, fol. 72 Hand: Greg, addns by Bacon	English	Discussed in <i>Works</i> , vol. 14, p. xlv

Ref.	Title	Date	Description	Language	Related material
MS 186, fols. 35v–6	List of experiments with tin	c. 1690	Hand: Bacon	English	
MS 186, fols. 36v–9	Inventory of the content of various boxes, including ‘the long Box’ in Boyle’s bedroom	? 1691	Cf. BP 36, fols. 121–3; dated ‘January the 1st’, [1691] Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, pp. xlv, xlvii
MS 186, fols. 40–2	Introductory material on history of tin	c. 1690	Hand: Bacon	English	See <i>Works</i> , vol. 14
MS 186, fols. 43v–4	Experiment on precipitate solution of sublimate with oil of tartar	c. 1690	Hand: Bacon	English	
MS 186, fol. 45	Text concerning saltiness of sea	c. 1690	Hand: Bacon	English	
MS 186, fols. 46–52	MS versions of various parts of <i>Exp. &amp; Obs. Physicae</i>	c. 1690	(i) Chapter II, observations IV and VIII (fols. 46–9) (ii) Chapter II, final paragraph in observation X (fol. 49) (iii) Second paragraph at start of chapter II (fol. 50) (iv) Chapter III, observations XX, XVIII, and XXI (fols. 50v–2) Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 386, 388, 390, 385, 395
MS 186, fols. 53–4	Material relating to <i>Christ. Virt., II</i>	c. 1690	Two separate paragraphs: (i) MS version of subsection 4 (‘Applicatory Reflections’), first paragraph in section on ‘Admiration and Celebration’ of God (ii) Unpublished paragraph admitting that, though what is said ‘in the foregoing Article’ might be employed here, thus making ‘a	English	(i) <i>Works</i> , vol. 12, p. 487

Ref.	Title	Date	Description	Language	Related material
MS 186, fols. 54v–7	Introductory material, evidently relating to <i>Medicina Chromatica</i>	c. 1690	distinct Article’ unnecessary, he thinks it ‘may not be amis to set down by themselves some few things’ that move men to praise God ‘upon the account of his works’. Hand: Bacon	English	See <i>Works</i> , vol. 14
MS 186, fols. 58v–9	Unpublished text on ‘The use of the Chromatick examen’, intended for <i>Medicina Chromatica</i>	c. 1690	Hand: Smith	English	Published in <i>Works</i> , vol. 14, pp. xxxiii–xxxiv
MS 186, fol. 60	List of ‘Particulars belonging to the <i>Medicina Chromatica</i> ’	c. 1690	Hand: Smith	English	Published in <i>Works</i> , vol. 14, p. xxxv
MS 186, fol. 61	Material relating to <i>Exp. c<sup>o</sup></i> <i>Obs. Physicae</i>	c. 1690	MS version of final paragraph in chapter I, experiment XV, followed by unpublished paragraph about a MS sent him ‘by the favour of the worthy Deputy Governor of the East India Company M.T.’, which Boyle ‘lighted on’ after he ‘had written the foregoing pentads’ Hand: Bacon	English	<i>Works</i> , vol. 11, p. 384, including the previously unpublished paragraph
MS 186, fol. 62	Note on experiments missing from a collection	c. 1690	Hand: Bacon	English	
MS 186, fols. 63–4	Introduction to work on tin and note on particulars relating to <i>Medicina Chromatica</i>	c. 1690	Hand: Bacon	English	See <i>Works</i> , vol. 14

Ref.	Title	Date	Description	Language	Related material
MS 186, fol. 65	List of virtues	c. 1690	Hand: Bacon	English	
MS 186, fols. 65v–6	List of phenomena to remember	c. 1690	Hand: Bacon	English	
MS 186, fols. 66v–7	Account of experiment by supposed adept	c. 1690	Hand: Bacon	English	
MS 186, fols. 67v–8	MS version of parts of <i>Christ. Virt., II</i>	c. 1690	Early version of subsection 4 (‘Applicatory Reflections’), paragraphs 8–10 and 17, in section on ‘Love’ of God. Much reworded before publication; the ‘third’ motive to love God, briefly stated here, was published as an afterthought on the ‘second’ motive, at the end of Aphorism XI Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 497, 489, 507 Fol. 67v published in MacIntosh, 2.2.21
MS 186, fol. 68v	List of phenomena to remember	c. 1690	Hand: Bacon	English	
MS 186, fols. 69v–70	Material relating to <i>Christ. Virt., II</i>	c. 1690	Unpublished paragraph on the ‘affinity between Gratitude to God & love of him’, originally intended for subsection 4 (‘Applicatory Reflections’) Hand: Bacon	English	See <i>Works</i> , vol. 12, p. 496 Published in MacIntosh, 2.2.23
MS 186, fols. 70v–2	Introductory material, perhaps for <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Hand: Bacon	English	See <i>Works</i> , vol. 11
MS 186, fols. 72v–5	MS versions of various sections of <i>Exp. &amp; Obs. Physicae</i> .	c. 1690	(i) Chapter IV, first pentade, ‘A Design’d Chymical Medicine’, fifth paragraph (fols. 72v–73) (ii) Chapter IV, second pentade, experiment	English	<i>Works</i> , vol. 11, pp. 403, 405, 406



Ref.	Title	Date	Description	Language	Related material
MS 186, fol. 76	MS version of part of <i>Christ. Virt., II</i>	c. 1690	II, first paragraph (fols. 73v–4) (iii) Chapter IV, second pentade, experiment II, fourth paragraph (fols. 74v–75). Hand: Bacon	English	<i>Works</i> , vol. 12, p. 496 Also published in MacIntosh, 2.2.24
MS 186, fol. 77	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Subsection 4 (‘Applicatory Reflections’), paragraph 3 in section on ‘Love’ of God Hand: Bacon, addns by Boyle	English	<i>Works</i> , vol. 11, p. 404
MS 186, fols. 78v–9	Behaviour of artificial acidulae	c. 1690	First paragraph of ‘A Design’d Chymical Medicine’ at end of chapter IV, first pentade, except final sentence Hand: Bacon	English	
MS 186, fol. 79v	Effects of spirit of salt	c. 1690	Hand: Bacon	English	
MS 186, fol. 80	How the 5th Article of unnamed treatise contains matters really belonging to history of light	c. 1690	Hand: Bacon	English	
MS 186, fols. 81–2	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	c. 1690	MS version of ‘Advertisement’ following experiment III in first pentade, chapter IV, except final paragraph; slightly rewritten in published version Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 401–2

Ref.	Title	Date	Description	Language	Related material
MS 186, fol. 83	Note apologising for imperfection of accompanying collection	c. 1690	Hand: Bacon	English	
MS 186, fols. 83v–84v	MS version of part of <i>Exp. &amp;c. Obs. Physicae</i>	c. 1690	MS version of ‘postscript’ to first pentade in chapter IV Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 403–4
MS 186, fols. 84v–85v	Introduction to <i>Medicina Chromatica</i>	c. 1690	Bacon	English	See <i>Works</i> , vol. 14
MS 186, fol. 85v	Contents of planned second volume of <i>Medicina Hydrostatica</i>	c. 1690	Copied out in BP 27, p. 385 Hand: Greg	English	See <i>Works</i> , vol. 11
MS 186, fol. 86	Incomplete recipe	c. 1690	Hand: Bacon	English	
MS 186, fols. 86v–87v	MS version of the list of Boyle’s unpublished writings dated 3 July 1691	1691	Cf. BP 36, fol. 72 Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, p. xlvi
MS 186, fols. 88v–89v	MS versions of parts of <i>Christ. Virt., II</i>	c. 1690	Several paragraphs in subsection 4 (‘Applicatory Reflections’), section on ‘Love’ of God: (i) paragraph 4 (fol. 88v); (ii) paragraph 2 (fol. 89); (iii) paragraph 15 (fol. 90v), showing that Boyle originally thought of this as belonging to the ‘6th’ Article; (iv) paragraph 7 (fol. 91), final three lines not published Hand: Bacon, corr. by Boyle	English	<i>Works</i> , vol. 12, pp. 495–9, with gaps, including previously unpublished material Material from fols. 88v, 89, 90v, 91 also published in MacIntosh, 2.1.18; 2.2.18–19, 25

Ref.	Title	Date	Description	Language	Related material
MS 186, fols. 91v–105	MS versions of various parts of published prefaces to <i>Medicinal Experiments</i> , and also related, unpublished material	c. 1690	(i) Fols. 91v–3: vol. II, ‘Author’s Preface’, paragraph 3, nearly as printed; (ii) fol. 93v: vol. I, ‘Author’s Preface’, related to paragraph 3; cf. 1688 edition, ‘Advertisements’, paragraph II, but MS postdates that edition; (iii) fols. 94v–7: vol. II, ‘Author’s Preface’, paragraph 2, as printed; (iv) fols. 97v–8: unpublished paragraph, apparently intended for vol. II, ‘Author’s Preface’; (v) fols. 98v–9: vol. II, ‘Author’s Preface’, paragraph 4, as printed; (vi) fols. 99v–101: vol. II, ‘Author’s Preface’, paragraph 1, as printed; (vii) fols. 103v–5: unpublished passage, explaining why he has not hesitated to include Galenic medicines in his collection Hands: Bacon, corr. by Greg	English	<i>Works</i> , vol. 11, p. 176; vol. 12, pp. 180, 209–12. Unpublished material discussed in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge 2000), pp. 202–22, passim
MS 186, fol. 105v	Unpublished paragraph relating how ‘The opportunity that is presented me by the publication of the 2nd Tome of the <i>Experimenta &amp; Observations Physicae</i> invites me to adde to the Chapter of other Communicated Observations two or three Chapters of Receipts & Processes relating to Medicine’	c. 1690	Hand: Greg	English	See <i>Works</i> , vol. 11. Published in M. Hunter, ‘How to Edit a 17th-century Manuscript’, <i>The Seventeenth Century</i> , 10 (1995), 277–310, on pp. 304–10, reprinted in id., <i>Editing Early Modern Texts</i> (Basingstoke, 2007), pp. 109–17
MS 186, fol. 106	Unpublished paragraph, hoping that readers will not hold him responsible for all the remedies in ‘the following Collection’	c. 1690	Apparently from a discarded version of the preface to <i>Medicinal Experiments</i>	English	See <i>Works</i> , vol. 12

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 186, fols. 107–8	Four ways of celebrating God's attributes	c. 1690	Fol. 108 blank Hand: Bacon	English	Published in MacIntosh, 2.2.22
MS 186, fol. 109	List of things to remember	c. 1690	Hand: Bacon	English	
MS 186, fol. 110	Material relating to <i>Christ. Virt., II</i>	c. 1690	Unpublished advertisement about the haphazard state of various passages related to 'the Motives to the Love of God', which Boyle lacks 'leasure' to compile 'into a coherent discours' Hand: Greg	English	Published in <i>Works</i> , vol. 12, p. 495n., and in MacIntosh, 2.2.20
MS 186, fols. 110v–13	MS versions of parts of <i>Christ. Virt., II</i>	c. 1690	Several paragraphs in subsection 4 ('Applicatory Reflections'), section on 'Love' of God: (i) discarded MS version of paragraph 10 (fol. 110v) (ii) paragraphs 16 and 17 (fols. 110v–11), slight changes before publication (iii) second paragraph in Aphorism XI (fol. 111v), originally called '3d' motive rather than 'second' (iv) discarded paragraph about how topics for 'Gratitude' and 'Love' intermingle (fols. 112v–13) Hands: Bacon, Greg	English	See <i>Works</i> , vol. 12, p. 497, 499, 507 Fols. 112v–13 published in MacIntosh, 2.2.26
MS 186, fol. 113v	List of 'Supernaturall phenomena'	c. 1690	Hand: Greg	English	Published in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 228–9

Ref.	Title	Date	Description	Language	Related material
MS 186, fols. 114–16	Material relating to <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Material for unpublished 2nd tome, alluding to ‘the favorable Reception that has bin vouchsaf to the first Tome of our Experimenta et Observationes Physicae’; includes (fol. 116v) a list of ‘Particulars to strange Reports’, apparently for the sequel Hand: Bacon	English	See <i>Works</i> , vol. 11
MS 186, fols. 117v–18	‘A Postscript that was written after the Advertisements & many of the Papers belonging to the 2d Part of the Xtian Virtuoso’	c. 1690	Passage relating to <i>Christ. Virt., II</i> ; apologies for inadequate treatment of some subjects Hand: Bacon	English	Published in <i>Works</i> , vol. 12, p. 530
MS 186, fols. 119v–21	Discarded version of preface to <i>Medicinal Experiments</i>	c. 1690	States that 1688 edition was privately printed Hand: Greg	English	See <i>Works</i> , vol. 12 Discussed in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 202–22, passim
MS 186, fol. 122	‘Chapters design’d for the 2d [& 3rd, del.] Tomes of the Expt & Observ. physicae’	c. 1690	A list of heads Hand: Bacon	English	See <i>Works</i> , vol. 11, and above, p. 187
MS 186, fols. 123–4	Advertisement to ‘Cogitationes Physicae’	c. 1690	Hand: Bacon	English	Fair copy in BP 9, fol. 68
MS 186, fols. 124–7	MS version of Advertisements at start of <i>Christ. Virt., II</i>	c. 1690	Several changes before publication, incl. lengthy passage later deleted NB: Date of composition proves that this advertisement was not seen by Henry Oldenburg, as Miles suggested Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 429–30, including previously unpublished passages



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 186, fols. 127v–31	Compatibility of scriptures with reason	c. 1690	Fol. 131 blank Hand: Bacon	English	
MS 186, fols. 132v–5	Two different types of metaphysical dictate, and note on vision	c. 1690	Hand: Bacon	English	
MS 186, fol. 135	MS version of part of <i>Christ. Virt., II</i>	c. 1690	Final paragraph in proposition I, section I, subsection 4, Aphorism III; no changes before publication Hand: Bacon	English	<i>Works</i> , vol. 12, pp. 443–4
MS 186, fols. 136–7	Deleted words only	c. 1690	Fol. 137 blank	English	
MS 186, fols. 138v–9	Requisites of a parable medicine	c. 1690	Hand: Greg	English	
MS 186, fols. 139v–40	Material relating to <i>Christ. Virt., I, Appendix</i>	1691	‘Arguments for the third Conference’, in verse Hand: Greg	English	See <i>Works</i> , vol. 12
MS 186, fol. 141	Medicine: further introductory remarks	c. 1690	Hand: Greg	English	
MS 186, fol. 142	‘A List of particulars for parable medecins’	c. 1690	Hand: Greg	English	
MS 186, fols. 143–4	Unpublished passage, apparently intended for 2nd tome of <i>Exp. et Obs. Physicae</i>	c. 1690	Commenting on Boyle’s hopes for the utility of the things reported in this work, and how it might encourage the learned to do experiments. Also expresses his intention ‘to insert a pretty number of Receipts & processes’ in ‘divers of the following chapters’; cf. MS 186, fol. 105v Hand: Greg	English	See <i>Works</i> , vol. 11

Ref.	Title	Date	Description	Language	Related material
MS 186, fol. 145	‘An Advertisement about the Lists of Mr Boyles Processes & Receipts’	c. 1690	Note claiming that ‘the greatest part of those fair Copies’ were ‘fraudulently convey’d away’, so that Boyle was ‘reduc’d to pick up among the Papers thrown aside as many rought Draughts of the foremention’d Papers as I could light of’ Hand: Bacon	English	
MS 186, fol. 146–8	MS version of part of <i>Christ. Virt., II</i>	c. 1690	First three paragraphs in proposition I, section I, subsection 4, Aphorism III; the third paragraph comes first in MS Hand: Bacon	English	<i>Works</i> , vol. 12, p. 443
MS 186, fols. 149–50	MS version of part of <i>Christ. Virt., II</i>	c. 1690	Aphorism VIII at end of proposition I Hand: Bacon	English	<i>Works</i> , vol. 12, p. 505
MS 186, fol. 151	‘6 Propositions of the 2d part of the Christian Virtuoso’	c. 1690	Three sets of verse, giving contents of the work Hand: Greg	English	See <i>Works</i> , vol. 12
MS 186, fols. 152–3	Verses on <i>Christian Virtuoso</i> , part 2, on the use of experiments in philosophy, rules of philosophy, etc.	c. 1690	Hand: Bacon Fols. 154–71 blank	English	
MS 186, fol. 172	‘A Transcript of Dr. Locks Notes about Light’	c. 1690	Hand: Greg	English	
MS 186, fol. 173v	‘A short & true account of the present State of the E: India Companies’ stock, as it now lyes before the honourable house of Commons’	c. 1690	Hand: Greg	English	

Ref.	Title	Date	Description	Language	Related material
MS 186, fols. 174v–5	‘A Supplement to the tract of strange reports contains ...’, with list of contents of <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Hand: Greg	English	See <i>Works</i> , vol. 11, and above, p. 187
MS 186, fol. 176	‘The French Kings Testimonie c. 1690 of the prince of Orange’	c. 1690	Brief note in French Hand: Greg	French	
MS 186, fol. 176v	‘The Heads of the first Part of the Mutual good Offices of Reason and Revelation’	c. 1690	Hand: Bacon	English	
MS 186, fol. 177v	‘Chapters design’d for the 2d Tome of Experimenta & Observationes physicae’	c. 1690	A list of heads Hand: Greg	English	See <i>Works</i> , vol. 11, and above, p. 187
MS 186, fol. 178v–9	Part of introduction to a compilation	c. 1690	Hand: Greg	English	
MS 186, fol. 180	‘Particulars belonging to the <i>Medicina Chromatica</i> ’, list of topics to discuss	c. 1690	Hand: Bacon	English	Published in <i>Works</i> , vol. 14, pp. xxxv–xxvi
MS 186, fols. 181–2	MS version of part of <i>Christ. Virt., I, Appendix</i>	c. 1690	‘A Short Preamble to the 4 Conferences’. For a copy, see BP 1, fol. 133 Hands: Greg, Bacon	English	See <i>Works</i> , vol. 12, p. 369
MS 186, fol. 183	‘Particulars belonging to the <i>Medicina Chromatica</i> ’, another list of topics to discuss	c. 1690	Hand: Greg	English	Published in <i>Works</i> , vol. 14, p. xxxvi
MS 186, fols. 184v–5	MS version of part of <i>Christ. Virt., II</i>	c. 1690	Paragraph 14 in subsection 4 (‘Applicatory Reflections’), section on ‘Love’ of God Hand: Bacon, corr. by Boyle	English	<i>Works</i> , vol. 12, pp. 499–500

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 186, fol. 186	Note on contents of folders of c. 1690 Boyle's papers	c. 1690	Hand: Greg	English	Related to <i>Works</i> , vol. 14, pp. 349–50
MS 186, fols. 187–8	Notes on the acreage of Ireland, and the proportions of it owned by Protestants and Catholics before and after the Civil War	c. 1690	Hand: Bacon	English	
MS 186, fol. 189	Notes on abbreviations	c. 1690	Duplicate of fol. 1v Hand: Bacon	English	

**MS 187: Notebook, 1690–1691**  
**Modern binding; written parallel to spine; foliated; 167 folios. Fols. 1–38 written from front; fols. 91v–167 written from back; fols. 39–91 blank. Fol. 5 omitted from foliation.**

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 187, fol. 0	Unpaginated leaf, verso: Memorandum	1690–1691	Hand: Greg	English	
MS 187, fols. 1–2	God's attributes and nature	1690–1691	Hand: Bacon	English	
MS 187, fol. 2v	Part of dialogue	1690–1691	Hand: Greg	English	
MS 187, fol. 3	Addresses. On verso, note on list of experiments or recipes	1690–1691	Hands: Greg, Bacon	English	

Ref.	Title	Date	Description	Language	Related material
MS 187, fol. 4v	Section of text on Boyle's medical views	1690–1691	Hand: Greg	English	Published in M. Hunter, 'Boyle versus the Galenists', <i>Medical History</i> , 47 (1997), 347; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), p. 183
MS 187, fols. 6v–8	Fragment of 'Dialogue on the Transmutation and Melioration of Metals'	1690–1691	Hand: Bacon	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), p. 277
MS 187, fol. 8v	Proposal to divide following collection between 'Theoricall' and 'Historicall'	1690–1691	Hand: Greg	English	
MS 187, fol. 9	Text concerning calculation of specific gravity of stones, etc.	1690–1691	Hand: Bacon		
MS 187, fol. 9v	'Postscript' concerning minerals	1690–1691	Hand: Greg	English	
MS 187, fol. 10	Calculation of specific gravities of fluids	1690–1691	Provided by John Wallis. Hand: Greg	English	See <i>Correspondence</i> , vol. 6, pp. 121–2
MS 187, fols .11v–12	Note on limited availability of antimonial glass	1690–1691	Fol. 12 blank Hand: Greg	English	
MS 187, fols. 13v–14	'The requisites of a good Hypothesis' (verse) (cf. BP 36, fols. 57–8, but up to rule 5 only).	1690–1691	Fol. 14 blank Hand: Greg	English	



Ref.	Title	Date	Description	Language	Related material
MS 187, fols. 15v–17	MS version of sequel pointing out that the <i>Advertisement</i> explains why the notes sent to him are in so confused a form	c. 1690	Copied out in BP 35, fol. 198 Hand: Greg	English	See <i>Works</i> , vol. 11, p. xxiii
MS 187, fol. 18	List of phenomena for <i>Exp. c<sup>o</sup> Obs. Physicae</i>	c. 1690	Hand: Greg	English	See <i>Works</i> , vol. 11
MS 187, fol. 19	Section of text on value of cold drinks	1690–1691	Hand: Greg		
MS 187, fol. 20	MS version of part of <i>Christ. Virt., II</i>	c. 1690	Opening paragraph of Proposition I, section II, subsection 1, article III; final five words not printed Hand: Greg	English	<i>Works</i> , vol. 12, p. 453
MS 187, fol. 21–2	Notes on weighing quicksilver; experiment with gold	1690–1691	Fol. 22 is partly torn out, and fol. 21 is the stub of a torn-out leaf Hands: Greg, Bacon	English	
MS 187, fols. 23–4	Chemical processes for analysis of ore	1690–1691	Fol. 24 partly torn out Hands: Bacon, Greg	English	
MS 187, fols. 25v–7	Introduction to work on uses of experience in natural philosophy	1690–1691	Hands: Bacon, Greg	English	
MS 187, fols. 28v–30	Introduction to unpublished tract on inflammability	c. 1690	Apparently intended for unpublished <i>Mechanical Origin of Flame</i> Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, p. xv

Ref.	Title	Date	Description	Language	Related material
MS 187, fols. 30v–1	A list of books provided & to be provyded for the Collection 1691 making by Mr. Boyle of books tending to the prooffe & defence of the truth of the Christian Religion'	1690–1691	Hand: Greg	English	Published in P. Anstey, 'The Christian Virtuoso and the Reformers', <i>Lucas</i> , 27–8 (2000), 5–40, on pp. 32–4
MS 187, fols. 32v–5	Discarded version of 'Advertisement' to 'Strange Reports' ( <i>Exp. &amp; Obs. Physicae</i> )	c. 1690	With text of footnote to the first paragraph, as published (fol. 35). For another version, see MS 189, fol. 118 Hand: Greg	English	Published in <i>Works</i> , vol. 11, pp. lxvii–lxviii. See also <i>ibid.</i> , p. 429
MS 187, fols. 35v–7	How a MS by van Helmont came to London, but only one sheet of it escaped the Great Fire	1690–1691	Hand: Bacon	English	
MS 187, fol. 38	Requisites of a parable of medicine	1690–1691	Hand: Greg	English	
MS 187, fol. 91v	Unpublished paragraph on the usefulness of 'the Chromatick Examen of bodies'	c. 1690	Intended for <i>Medicina Chromatica</i> Hand: Greg	English	See <i>Works</i> , vol. 14
MS 187, fols. 92v–3	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Chapter V, second pentade, experiment II, Scholium Hand: Greg	English	<i>Works</i> , vol. 11, p. 424
MS 187, fols. 94–6	Boyle's notes on the contents and whereabouts of the second part of the <i>Christian Virtuoso</i> , with additional comments comparing the disorganized state of this book to <i>Style of the Scriptures</i>	1690–1691	Copied out entirely in BP 5, fol. 94, and partially in BP 1, fol. 54 Hand: Bacon	English	Published from the version in BP 5, fol. 94, in <i>Works</i> , vol. 12, pp. lxv–lxvi

Ref.	Title	Date	Description	Language	Related material
MS 187, fol. 97v	Disposition of French armies as of 'May 29. [16]91'	29 May 1691	Hand: Greg	English	
MS 187, fol. 98v	'A Notable comminution of Gold into powder that will sinke in water' (title only)	1690–1691	Hand: uncertain	English	
MS 187, fols. 99–102	MS version of part of <i>Christ. Virt., II</i>	1690–1691	Section II, subsection I, article 4, paragraphs 11 and 12 Hand: Bacon, addns by Boyle	English	<i>Works</i> , vol. 12, pp. 469–70, including previously unpublished sentence
MS 187, fol. 103	Things to remember	1690–1691	Hand: Bacon	English	
MS 187, fols. 104–5	Explanation for author's care in differentiating personal knowledge from hearsay	1690–1691	Hand: Bacon	English	
MS 187, fols. 105v–6	Section of text dealing with the particulars recommended by Boyle to 'Trallianus'	1690–1691	Cf. BP 186, fols. 19v–20 Hand: Bacon	English	Published in M. Hunter, 'Boyle versus the Galenists', <i>Medical History</i> , 47 (1997), p. 338; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), p. 174
MS 187, fols. 107–8	'The 2d Tome of Exptia & Obs: Physicae consists of these chapters & Titles'	c. 1690	List of heads (fol. 107) and 'A Scheme or method of the <i>Experimenta et Observationes Physicae</i> ', describing various parts of work, which 'are not intended to be publisht all at once' (fol. 108). Some changes in structure are evident when compared with published portion Hand: Bacon	English	See <i>Works</i> , vol. 11, and above, p. 187

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 187, fols. 109–12	MS version of advertisement at the end of chapter II in ‘Greatness of Mind’ ( <i>Christ. Virt., I</i> )	c. 1690	Minor changes before publication; ending reworted Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 358–9
MS 187, fols. 112v–15	Introductory material on parable medicines	1690–1691	Fol. 115v blank Hands: C, Greg, Bacon	English	
MS 187, fols. 116–17	Notes on experiments about cold	1690–1691	Hand: Bacon	English	
MS 187, fols. 117v–19	Material relating to <i>Christ. Virt., I</i>	c. 1690	Probably a suppressed version of two paragraphs from ‘Greatness of Mind’. First paragraph may have been intended for the advertisement at the end of chapter II. Second paragraph, on humility, was apparently intended for ch. V, ‘fourth fragment’ Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 359, 364
MS 187, fols. 120v–1	Notes on types of experiments	1690–1691	Hand: Bacon	English	
MS 187, fols. 122v–3	MS version of part of <i>Christ. Virt., II</i> , and related memorandum	1690–1691	Section II, article IV, opening paragraph and start of the next paragraph (the latter reworted before publication) Hand: Greg	English	<i>Works</i> , vol. 12, p. 466
MS 187, fol. 124	Explanation of content of accompanying paper	1690–1691	Hand: Greg	English	
MS 187, fol. 125v	‘Memoires for an Exp[er]imental History of the Principles of mixt Bodys. Especially those asserted by the Chymists’ (title only)	1690–1691	Hand: Bacon	English	

Ref.	Title	Date	Description	Language	Related material
MS 187, fol. 126	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Chapter II, opening paragraph Hand: Bacon Fols. 127–8 blank	English	<i>Works</i> , vol. 11, p. 385
MS 187, fol. 129	Address	1690– 1691	Hand: uncertain	English	
MS 187, fols. 129v–30	Note on categories of fragmentary writings	1690– 1691	Hand: Bacon	English	Published in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 129–30
MS 187, fols. 131–2	List of topics to ‘R[emembe]r’, c. 1690 probably related to unpublished part of ‘Strange Reports’ ( <i>Exp. &amp; Obs. Physicae</i> )	1690– 1691	Fol. 132 blank Hand: C	English	Published in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), p. 229
MS 187, fols. 133v–5	Notes on materials from which cheap medicines available	1690– 1691	Hand: Bacon	English	
MS 187, fol. 136v	Excerpt from preface to unpublished essay on flame, ‘to show in general that Flame & by consequence Inflammability may have a mechanical Origine, or if you please be mechanically producible’	c. 1691	Apparently intended for unpublished <i>Mechanical Origin of Flame</i> Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, p. xv See also MS 186. fols. 9v–12
MS 187, fol. 137	Note on ‘aurum fulminans’	1690– 1691	Hand: Bacon	English	



Ref.	Title	Date	Description	Language	Related material
MS 187, fol. 138v	Introduction to philosophical or theological fragments	1690 – 1691	Hand: Bacon	English	
MS 187, fols. 139v–40	Discarded version of preface of <i>Medicinal Experiments</i>	1690–1691	Hand: Greg	English	See <i>Works</i> , vol. 12; discussed in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 202–22, passim
MS 187, fols. 141–2	Account of conversation with the Bishop of St Asaph [William Lloyd] about events in Piedmont and Savoy, ‘Jun. 22 1690’	22 June 1690	Hand: Greg	English	
MS 187, fols. 143v–4	Material relating to <i>Medicina Hydrostatica</i>	c. 1690	Two unpublished paragraphs, on ‘the 5th use of our Hydrostaticall Way of examining drugs’ and comments on certain oils, relating to material in chapter VII Hand: Greg	English	Published in <i>Works</i> , vol. 11, p. 222n
MS 187, fols. 144v–6	Introductory material on corruption and preservation of bodies	1690–1691	Hand: Greg	English	
MS 187, fols. 146v–7	Importance of ‘indagatory, detecting or Exploratory ways of Tryals’	1690–1691	Hand: Bacon	English	
MS 187, fols. 147v–8	Note on fragment inserted in unnamed text, perhaps <i>Experimenta &amp; Observationes Physicae</i>	c. 1690	Hand: Greg	English	See <i>Works</i> , vol. 11

Ref.	Title	Date	Description	Language	Related material
MS 187, fol. 149v	Paragraph on inflammability, apparently intended for unpublished <i>Mechanical Origin of Flame</i>	c. 1691	Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, p. xv
MS 187, fol. 150	Note excusing incomplete and chaotic state of account of observations on chameleon	1690–1691	Hand: Greg	English	
MS 187, fols. 150v–2	Material relating to <i>Exp. &amp;c. Obs. Physicae</i>	c. 1690	MS version of ‘Advertisements about the Disposition of the Following Treatise’. Paragraphs VI and IX essentially as published, except at end of IX Hands: Greg, Bacon	English	<i>Works</i> , vol. 11, pp. 374–5
MS 187, fols. 152v–3	Unpublished chromatic experiment on a ‘spoonful of Serum of humane blood’	c. 1690	Probably intended for <i>Medicina Chromatica</i> Hand: Greg	English	See <i>Works</i> , vol. 14
MS 187, fols. 153v–4	Comment on work on reason and religion	1690–1691	Hand: Greg	English	
MS 187, fol. 155	Experiment with human blood	1690–1691	Hand: Greg	English	
MS 187, fol. 156v	MS version of part of <i>Christ. Virt., I, Appendix</i>	1690–1691	Conference IV, argument V, paragraphs 7 and 8. Copied out (with the rest of this argument) three times, in BP 1, fols. 96, 97 and 115 Hand: Greg	English	<i>Works</i> , vol. 12, p. 414

Ref.	Title	Date	Description	Language	Related material
MS 187, fol. 157v	Verses on philosophy and religion	1690–1691	Hand: Greg	English	Published in MacIntosh, 4.6.2
MS 187, fol. 158	Notes on union of body and soul	1690–1691	Hand: Smith	English	
MS 187, fol. 159v	List of ‘fragmenta philosophica’, unpublished works by Boyle	1690–1691	Hand: Greg	English	Published in <i>Works</i> , vol. 14, p. xxxviii
MS 187, fols. 160–1	Experiments on inflammability, c. 1691 apparently intended for unpublished <i>Mechanical Origin of Flame</i>	1690–1691	Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, p. xv
MS 187, fols. 162v–3	Examination of liquid/fragmentary body	1690–1691	Partly torn out Hand: Bacon	English	
MS 187, fol. 164v	General note concerning collection of Boyle’s writings	1690–1691	Hand: Bacon	English	
MS 187, fol. 165v	Part of letter agreeing to send processes to correspondent	1690–1691	Hand: Bacon	English	
MS 187, fol. 166	Note accompanying account of a useful menstruum	1690–1691	Hand: Bacon	English	
MS 187, fol. 167	List of experiments, perhaps for <i>Exp. &amp; Obs. Physicae</i>	c. 1690	Hand: Greg	English	See <i>Works</i> , vol. 11

MS 188: Notebook, 1673–1676

Modern binding; mainly written parallel to spine; foliated; 130 folios. Fols. 1–91v written from front; fols. 93–130 written from back. There are various groups of blank leaves, notably fols. 36–58 and 80v–91r.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 188, fol. 1	Fragmentary note and alphabet	1673– 1676	Partly cut out Hand: Slare	English	
MS 188, fols. 2–19	Memoranda recording weights, meteorological phenomena, etc., with a few experimental notes and miscellaneous jottings	October [1673] May 1674	Hands: Slare, Warr (fols. 4–5) Fols. 20–6 blank	English	
MS 188, fol. 27	Accounts (incomplete)	1673– 1676	Hand: ? Slare	English	
MS 188, fol. 28	List of theological books	1673– 1676	Hand: Slare Fols. 29–32 blank	English	
MS 188, fols. 32v–4	Weather notes, December 1673–January 1674	December 1673– January 1674	Hand: Slare	English	
MS 188, fol. 34v	Note on weight; ‘July the 28th [16]76’	28 July [16]76	Hand: Slare	English	
MS 188, fol. 35	Jottings	1673– 1676	Hand: Slare Fols. 36–58 blank	English	
MS 188, fol. 58v	Financial calculations	1673– 1676	Hand: Slare	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 188, fols. 59–60	Note of an assignment at an inn, in red crayon	1673–1676	Fol. 60 blank Hand: uncertain	English	
MS 188, fols. 61v–80	List of different substances, evidently in Boyle’s possession	1673–1676	Fols. 62, 76 blank Hand: Slare Fols. 80v–91r blank	English	
MS 188, fol. 91v	Experiments with plants sealed in vacuum, one with Papin’s receiver	1673–1676	On or after 17/21 April of unknown year Hand: Slare	English	
MS 188, fol. 93	Financial calculations	1673–1676	Hand: Slare	English	
MS 188, fol. 94	Jotting inc. date ‘August 19’	1673–1676	Hand: Slare	English	
MS 188, fol. 95	‘Small things in the Box in the last partition’	1673–1676	Hand: Slare Fols. 95v–9 blank	English	
MS 188, fols. 99v–102	Lists of chemicals and other items	1673–1676	Hand: Slare	English	
MS 188, fol. 103	Deleted figures	1673–1676	Hand: Slare Fols. 103v–8 blank	English	
MS 188, fols. 109–10	Lists of chemicals, etc.	1673–1676	Hand: Slare	English	
MS 188, fols. 111v–12	‘Things to be seald up’	1673–1676	List of foodstuffs and other items to be hermetically sealed in a receiver, three of which (bread, roasted flesh, and milk) are reported upon in <i>Spring, 2nd Continuation</i> Hand: Slare	English	See <i>Works</i> , vol. 9, p. xx



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 188, fols. 114–28	List of a series of experiments, many under dated headings between November of one year and the following 13 April	1673–1676	The experiments mostly involve mixing solutions and liquors, weighing, distilling, dissolving, fermenting, freezing, sealing in vacuum, etc. Hand: Slare	English	
MS 188, fols. 129–30	Miscellaneous jottings and notes	1673–1676	Hand: Slare	English	

MS 189: Notebook, 1689–1690

Modern binding; written parallel to spine; foliated; 165 folios. Fols. 1–57v written from front; fols. 58v–165 written from back. There are various groups of blank leaves, notably fols. 81v–94 and 132v–42.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 189, fol. IX	Address dated ‘Sept 16 (89)’	September 1689	Hand: Greg	English	
MS 189, fols. 1–2	Miscellaneous notes, incl on weights, addresses, ‘Names of the Committee of the Council for Irish Affairs’, and on Henrician statute against multiplication of gold and silver	1689–1690	Hand: mainly Greg	English	
MS 189, fol. 2	Copy of letter in French prophesying the Glorious Revolution	1689–1690	Hand: Greg	French	

Ref.	Title	Date	Description	Language	Related material
MS 189, fols. 3–5	MS version of part of <i>Medicina Hydrostatica</i> and note on address	1689–1690	Preface, final two paragraphs (fols. 3–4) and opening paragraph (fol. 5) Hands: Bacon, ? Fols. 6–8 blank	English	<i>Works</i> , vol. 11, pp. 201, 203–4
MS 189, fol. 9	MS version of part of <i>Christ. Virt., II</i>	1689	Section II, subsection 4 (‘Applicatory Reflections’), paragraph 6 Hands: Greg, Bacon	English	<i>Works</i> , vol. 12, p. 485
MS 189, fols. 10v–12	Excerpt from preface to experimental notes on flame and fire, apparently intended for unpublished <i>Mechanical Origin of Flame</i>	c. 1689	Copied out in BP 26, fol. 68. Fol. 12 blank Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, p. xv
MS 189, fol. 13	Promise by Boyle’s assistant not to divulge details of any experiments, processes etc. to anyone	1689–1690	Hand: Bacon	English	Published and reproduced in S. Shapin, <i>A Social History of Truth</i> (Chicago, 1994), pp. 403–4
MS 189, fols. 14v–15	Superseded version of part of <i>Exp. &amp; Obs. Physicae</i>	1689–1690	‘Advertisements about the Disposition of the Following Treatise’, paragraph VI, followed by text of paragraph VIII Hand: Bacon	English	<i>Works</i> , vol. 11, p. 374
MS 189, fols. 15v–17	Note on experiments with snake stones authorised by King and Queen	1689–1690	Hand: Bacon	English	
MS 189, fols. 17v–18	List of the contents of the 1680 de Tournes Geneva edition of Boyle’s <i>Works</i>	1689–1690	Fols. 18v–20 blank Hand: C	English	Discussed in <i>Works</i> , vol. 1, p. lxxxn

Ref.	Title	Date	Description	Language	Related material
MS 189, fols. 20v–2	Part of Boyle’s essay on parable medicines	1689–1690	Hands: Bacon, Greg	English	
MS 189, fols. 22v–3	MS version of part of <i>Medicina Hydrostatica</i>	1689–1690	‘Postscript’ to ‘Previous Hydrostatical Way of Estimating Ores’, virtually as published Hand: Greg	English	<i>Works</i> , vol. 11, p. 280
MS 189, fols. 24v–6	MS version of further sequel to 1688 <i>Advertisement</i>	1689–1690	Copied out in BP 36, fol. 17. Fol. 26 blank Hand: Greg	English	<i>Works</i> , vol. 12, p. 359
MS 189, fols. 27v–8	Methodological prescriptions for philosophers/naturalists	1689–1690	Hands: Bacon, Greg Fols. 28v–34 blank	English	
MS 189, fols. 34v–6	Notes on preserving bodies	1689–1690	Hand: Greg	English	
MS 189, fols. 36v–7	Note on role of ‘docimastick’ or probatory experiments	1689–1690	Hand: Bacon	English	
MS 189, fols. 38v–9	Part of prefatory material to a natural philosophical treatise	1689–1690	Hand: C	English	
MS 189, fols. 39v–40	List of phenomena	1689–1690	Hand: Greg	English	
MS 189, fols. 40v–1	‘Heads belonging to the Essay of the Discernment of Suppositions’	1689–1690	Hand: Greg (title by Bacon)	English	
MS 189, fols. 42v–3	Superseded version of part of <i>Exp. &amp; Obs. Physicae</i>	1689–1690	‘Advertisements about the Disposition of the Following Treatise’, paragraph IX, incl. final lines Hand: Greg	English	<i>Works</i> , vol. 11, pp. 375–6

Ref.	Title	Date	Description	Language	Related material
MS 189, fols. 44–6	Material on antidotes and concretions in animal bodies, etc.	1689–1690	Hands: Greg, Bacon	English	
MS 189, fols. 46v–7	Key to abbreviations	1689–1690	Hand: Greg	English	
MS 189, fols. 48v–9	Use of experimental to speculative philosophy	1689–1690	Hands: Greg, Bacon		
MS 189, fols. 50–1	Discarded version of part of preface to <i>Medicinal Experiments</i>	1689–1690	Hand: Bacon, corr. Boyle Fols. 51v–7 blank	English	See <i>Works</i> , vol. 12; discussed in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 202–22, passim
MS 189, fol. 57v	‘The french parliaments blasphemous Inscription’	1689–1690	Hand: Greg	English, Latin, French	
MS 189, fols. 58–61	Discarded version of part of preface to <i>Medicinal Experiments</i>	1689–1690	Hand: Bacon	English	See <i>Works</i> , vol. 12; discussed in M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 202–22, passim
MS 189, fol. 62	Preview of the four main topics for the whole of <i>Christ. Virt., I, Appendix</i> , in verse	1689–1690	Hand: C	English	See <i>Works</i> , vol. 12
MS 189, fols. 63–4	Notes on types of experiment	1689–1690	Hands: Greg, Bacon	English	
MS 189, fols. 65v–6	List of titles for <i>Exp. &amp; Obs. Physicae</i>	1689–1690	Hand: Bacon, corr. by Boyle	English	See <i>Works</i> , vol. 11, and above, p. 187

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 189, fol. 67v	Key to abbreviations	1689– 1690	Hand: Greg Fols. 68–75 blank	English	
MS 189, fol. 76	‘Advertisement’ concerning state of ensuing collection	1689– 1690	Fol. 77 blank Hand: Greg	English	
MS 189, fol. 78	‘An Abstract of the Chymicall Accompt booke from a Little before November the 1st 1689’ (title and one line only)	1689– 1690	Hand: C	English	
MS 189, fol. 79	Introductory material on apologetic function of study of nature	1689– 1690	Hand: Bacon	English	
MS 189, fols. 80v–1	MS version of part of <i>Christ. Virt., II</i>	1689– 1690	Section II, subsection 2, article IV, penultimate paragraph Hand: Bacon Fols. 81v–94 blank	English	<i>Works</i> , vol. 12, p. 475
MS 189, fols. 94v–5	Notes on parable medicines	1689– 1690	Hand: Bacon Fols. 96–8 blank	English	
MS 189, fols. 98v–100	MS version of part of <i>Christ. Virt., II</i>	1689– 1690	Final paragraph in section II, subsection 3, aphorism V Hand: Bacon, corr. by Boyle	English	<i>Works</i> , vol. 12, p. 483
MS 189, fols. 101v–3	Notes on poisons and how to distinguish them	1689– 1690	Hand: Bacon	English	
MS 189, fols. 104v–5	Note of an address	1689– 1690	Fol. 105 blank Hand: unknown	English	



Ref.	Title	Date	Description	Language	Related material
MS 189, fols. 106v–8	Reason for lack of detail in accompanying text	1689–1690	Fol. 108 blank Hand: Bacon	English	
MS 189, fols. 109–12	MS version of part of <i>Christ. Virt., II</i>	1689–1690	Section II, subsection 3, aphorism V, paragraphs 4 and 5. Followed immediately by material on fols. 98–100 Hand: Bacon, addns by Greg and Boyle	English	<i>Works</i> , vol. 12, pp. 481–3
MS 189, fols. 113v–14	Verses on contents of 14 subdivisions of Boyle’s writings	1689–1690	Hand: Greg	English	
MS 189, fols. 115–16	Discarded version of the preface to <i>Medicina Hydrostatica</i>	1689–1690	Hand: Bacon	English	Published in <i>Works</i> , vol. 11, pp. xlii–xliii
MS 189, fol. 117	Role of experiments for naturalists	1689–1690	Hand: C	English	
MS 189, fol. 118	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	1689–1690	‘Advertisement’ to ‘Strange Reports’, first paragraph. For a version of the footnote to this section, see MS 187, fol. 35 Copied out in BP 10, fol. 101 Hand: Greg	English	<i>Works</i> , vol. 11, p. 429
MS 189, fol. 119	Superseded version of part of <i>Medicina Hydrostatica</i>	1689–1690	‘Previous Hydrostatical Way of Estimating Ores’, final paragraph; opening lines published, the rest discarded Hand: Bacon	English	<i>Works</i> , vol. 11, p. 276, including previously unpublished material
MS 189, fols. 119v–21	Note concerning omitted material	1689–1690	Refers to lacuna before chapter 8 Hand: Bacon	English	Probably <i>Medicina Hydrostatica</i> . See <i>Works</i> , vol. 11, p. 222
MS 189, fols. 121v–2	Introduction to a discourse involving ‘Philander’ and a priest from a foreign country	1689–1690	Hand: Bacon	English	

Ref.	Title	Date	Description	Language	Related material
MS 189, fols. 122v–3	MS version of part of <i>Medicina Hydrostatica</i>	1689–1690	Chapter X, paragraph 2, first one and a half sentences Hand: Bacon	English	<i>Works</i> , vol. 11, p. 229
MS 189, fol. 124	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	1689–1690	‘Advertisements about the Disposition of the Following Treatise’, paragraph VII Hand: Greg	English	<i>Works</i> , vol. 11, pp. 374–5
MS 189, fols. 124v–5	List of nine of Boyle’s works, and other miscellaneous sections of text	1689–1690	Cf. BP 36, fol. 100 Hand: Greg	English	List discussed in <i>Works</i> , vol. 14, p. xxxviii
MS 189, fols. 126–7	Notes on poisons and antidotes	1689–1690	Hand: Smith	English	
MS 189, fols. 128v–9	Reasons for repeating experiments	1689–1690	Hand: C	English	
MS 189, fols. 130–1	Introductory note to experimental treatise	1689–1690	Hand: Bacon	English	
MS 189, fol. 132	Notes on ambition	1689–1690	Hand: Bacon Fols. 132v–42 blank	English	
MS 189, fols. 143–5	MS version of part of <i>Medicina Hydrostatica</i>	1689–1690	‘Advertisement’ to ‘Previous Hydrostatical Way of Estimating Ores’, starting at para 2; some rewording and additional words and phrases in published version. Fol. 145 blank Hands: Bacon, Greg	English	<i>Works</i> , vol. 11, pp. 255–60

Ref.	Title	Date	Description	Language	Related material
MS 189, fol. 146	MS version of part of <i>Exp. et Obs. Physicae</i>	1689–1690	‘Advertisements about the Disposition of the Following Treatise’: one sentence continuing the text in fols. 149v–50 Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 373–4
MS 189, fols. 146v–7	Guide to abbreviations	1689–1690	Hand: Bacon	English	
MS 189, fols. 147v–8	‘A prefatory advertisement about severall of Mr. Boyles writings’	1689–1690	Hand: Greg	English	
MS 189, fol. 148v	List of properties of air, perhaps related to <i>General History of Air</i>	1689–1690	Copied out in BP 26, fol. 28 Hand: Greg	English	Published from BP 26, fol. 28, in vol. 12, p. xiii
MS 189, fol. 149	List of experiments to try with blood, perhaps for second edition of <i>Human Blood</i>	1689–1690	Hand: Greg	English	See MS 185, fol. 56, and Hunter & Knight, <i>Human Blood</i> , pp. xiii, 31
MS 189, fols. 149v–50	MS version of part of <i>Exp. et Obs. Physicae</i>	1689–1690	‘Advertisements about the Disposition of the Following Treatise’, opening paragraph and paragraphs I–III, except final lines of III. Text on fol. 149v is followed by that on fol. 146 Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 373–4
MS 189, fols. 151v–2	Material relating to <i>Medicina Hydrostatica</i>	1689–1690	‘Section of text on specific gravity of ‘lapides manatei’ (manatee’s stones), related to table at the end of ‘Previous Hydrostatical Way of Estimating Ores’, though values given here are not published there Hand: Greg	English	See <i>Works</i> , vol. 11, p. 278

Ref.	Title	Date	Description	Language	Related material
MS 189, fol. 153	List of categories of natural explanations	1689–1690	Hand: Greg	English	
MS 189, fol. 154	Material relating to <i>General History of Air</i>	1689–1690	Unpublished passage defining what Boyle means by ‘the word Air’, probably intended for publication under title 1 Hand: Greg	English	See <i>Works</i> , vol. 12, p. 12
MS 189, fol. 155	Preamble to collection of experiments on poisons and antidotes	1689–1690	Hand: Bacon	English	
MS 189, fols. 156v–7	Observations on spontaneous combustion, apparently intended for unpublished <i>Mechanical Origin of Flame</i>	1689–1690	Hand: Bacon	English	Discussed in <i>Works</i> , vol. 14, p. xv
MS 189, fol. 157v	Things to consider regarding (i) air; (ii) God’s works	1689–1690	Hand: Greg	English	(ii) Published in MacIntosh, 3.4.9
MS 189, fol. 158v	Note on ‘Samuel Barnton a Shoemakers Son in Houndsditch fell into a ditch when he was 11 years of age whereupon he is grown no bigger of Stature being now 19’	1689–1690	Unpublished note, perhaps related to unpublished part of ‘Strange Reports’ ( <i>Exp. &amp; Obs. Physicae</i> ) Hand: uncertain	English	See <i>Works</i> , vol. 11
MS 189, fols. 159–62	‘A Continuation of loose notes &c. most of them set down to recall to minde fuller passages referable to them from Jan[ua]ry 25th’ (title only)	1689–1690	Fols. 159–61 torn out, leaving stubs only Hand: Greg	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 189, fol. 163	MS material relating to <i>Christ. Virt., I, Appendix</i>	1689–1690	Unpublished snippet from a reply to Manlius Hand: Bacon	English	See <i>Works</i> , vol. 12
MS 189, fols. 163v–6	MS version of part of <i>Medicina Hydrostatica</i>	1689–1690	‘Previous Hydrostatical Way of Estimating Ores’, section VI, first paragraph, with note (fol. 165) on the weight of a hydrostatical jar in air and water. Parenthetical phrase about flux-powder was added later Hand: Bacon, Greg	English	<i>Works</i> , vol. 11, pp. 263–4

**MS 190: Notebook, 1684–1690**  
**Modern binding; written parallel to spine; foliated; 176 folios. Fols. 1–142 written from front; fols. 143–76 written from back.**

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 190, fols. 1X, 1–5	Miscellaneous memoranda, including addresses, references, calculations, notes on experiments and meteorological observations	1684–1690	Hands: Greg, C, Smith, Bacon	English	
MS 190, fol. 6	Material relating to <i>Notion of Nature</i>	Mid–late 1680s	(recto:) MS version of ‘Advertisement’, hastily written after Boyle has seen printed sheets for most of the book; several changes prior to publication (verso:) MS version of transitional paragraph on vacuums at end of section VII, axiom IV Hand: Greg	English	<i>Works</i> , vol. 10, p. 443, 533 Text on recto published in M. Hunter and E.B. Davis, ‘The Making of Robert Boyle’s ... <i>Notion of Nature</i> (1686)?’, <i>Early Science and Medicine</i> , 1 (1996), 204–72, on p. 227; article reproduced above as chapter 5. See above, p. 238



Ref.	Title	Date	Description	Language	Related material
MS 190, fols. 7–8	Lists of names, page references in Glauber and books sent by Mr Frazer, 25 October 1688	25 October 1688	Hand: Greg	English	
MS 190, fol. 8v	‘Experiments about cold’	1684–1690	Hand: Greg	English	
MS 190, fol. 9v	List of experiments to be carried out about viper poison	1684–1690	Hand: Greg Fols. 10–11 blank	English	
MS 190, fol. 12	Material relating to <i>Languid Motion</i>	Mid–late 1680s	‘Addenda Tract[atus] de Motu Languido’, a list of eight topics apparently intended to be added to a Latin edition of <i>Languid Motion</i> , though none was ever published Hand: Greg	English	See <i>Works</i> , vol. 10
MS 190, fols. 13–142	‘Experiments to be done’	December 1684–February 1690	Hand: mostly Greg, but interspersed with entries by C and Smith	English	
MS 190, fols. 143–4	Table of dates and numbers, perhaps of experiments, from February ‘1688’ [1689] to February 1690	February 1688 [1689]–February 1690	Hand: Greg	English	
MS 190, fol. 144v	Rates at which forfeited lands in Ireland sold to adventurers	1684–1690	Hand: Greg	English	
MS 190, fol. 145	Irish Bible: note on printing costs, etc., and on addresses	1684–1690	Hands: ?, C	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 190, fols. 146–66	Weather observations entered in tabular form	December 1684– January 1686	Hand: Greg	English	
MS 190, fols. 167–70	List of numbers of experiments done on different dates from December 1684 to June 1688	December 1684–June 1688	Hand: Greg	English	
MS 190, fol. 171	Table of weights and list of experiments	July 1688– January 1689	Hand: Greg	English	
MS 190, fol. 172	Brief weather notes for various dates between July and December of an unknown year; addresses	1684– 1690	Hands: Greg, Smith, C	English	
MS 190, fol. 173	Notes on the location of finds of tin and ‘gold hops’ in Devon	1684– 1690	Hand: C	English	
MS 190, fol. 174	List of recipients of presentation copies of <i>Final Causes</i> , and calculation	1688	Hand: Greg	English	List published in <i>Works</i> , vol. 11, p. xx
MS 190, fol. 175	List of numbers/calculation	1684– 1690	Hand: uncertain	English	
MS 190, fol. 176	Experimental notes, one dated ‘July the 26: [16]84’	1684– 1690	Hand: ?C	English	

MS 191: Notebook, c. 1688

Modern binding; written parallel to spine; slightly erratically foliated; original tabs survive; 130 folios. Fols. 1–92 written from front; fols. 110–29 written from back. There are various groups of blank leaves, notably fols. 30–90 and 92v–109.

Ref.	Title	Date	Description	Language	Related material
MS 191, fols. 1–2	List of Boyle’s papers in ‘new Press’, dated 22 July 1688	1688	Hand: Smith Fols. 2v–8 blank	English	Published in <i>Works</i> , vol. 14, p. 347
MS 191, fols. 9–13	Introductory material to sequel Late 1680s to ‘Alcali and Acid’ ( <i>Mechanical Qualities</i> )		Hand: Smith	English	See <i>Works</i> , vol. 8
MS 191, fols. 14–15	Original version of part of <i>Christ. Virt., I</i>	c. 1688	Paragraphs VIII, IX, XI Hand: Smith	English	<i>Works</i> , vol. 11, p. 335
MS 191, fols. 15v–16	Note on how disuse or disease can make the eye very sensitive to light	c. 1688	Similar to discussion of design and the eye in section II of <i>Final Causes</i> . Probably for intended appendix or ‘Vitiated Sight’. Endorsed ‘Tbd’ Hand: Bacon	English	See <i>Works</i> , vol. 11
MS 191, fols. 17–19	Material intended for appendix to <i>Final Causes</i>	c. 1688	How differences in the structure of teeth between men and animals do not show them to be deficient in certain animals, but part of an overall organism that compensates in other ways; similar to section IV, proposition III, paragraphs 27–8 Hand: Smith	English	Published in <i>Works</i> , vol. 14, pp. 171–2
MS 191, fols. 20–2	Part of experimental discourse involving sparks produced from quicklime by spirit of salt	c. 1688	Hand: Smith	English	

Ref.	Title	Date	Description	Language	Related material
MS 191, fols. 23–4	Text on phenomena of shining c. 1688 fishes and luminous sea		Hand: Smith	English	
MS 191, fol. 25	Tiny fragment of discourse	c. 1688	Hand: uncertain	English	
MS 191, fols. 26–7	MS version of part of preface to <i>Christ. Virt., I</i>	c. 1688	The seventh paragraph; MS ending not published Hand: Bacon	English	<i>Works</i> , vol. 11, pp. 287–8, where the previously unpublished material is included
MS 191, fol. 28	Brief note, evidently for letter draft	c. 1688	Hand: Greg	English	
MS 191, fols. 28v–9	MS version of part of <i>Christ. Virt., I</i>	c. 1688	First part of third paragraph in proposition II Hand: Greg Fols. 30–90 blank	English	<i>Works</i> , vol. 11, pp. 313–14
MS 191, fols. 90v–1	‘The first sort of the Uses of Destillation tends to the Examen of the Genuineness or Adulterateness of Medicines’	c. 1688	Outline of topics for a section of intended sequel to <i>Medicina Hydrostatica</i> on <i>materia medica</i> Hand: Greg	English	See <i>Works</i> , vol. 11
MS 191, fol. 92	Note on ‘some experiments or phaenomena supernaturall’, witnessed by ‘A Dr of physick ingenious learned, sober [and] reserved’	c. 1688	Perhaps intended for unpublished part of ‘Strange Reports’ ( <i>Exp. &amp; Obs. Physicae</i> ) Hand: Greg Fols. 92v–109 blank	English	See <i>Works</i> , vol. 11
MS 191, fol. 110	Part of introduction to unpublished part of ‘Strange Reports’ ( <i>Exp. &amp; Obs. Physicae</i> )	c. 1688	Hand: Bacon	English	See M. Hunter, <i>Robert Boyle: Scrutpulosity and Science</i> (Woodbridge, 2000), p. 230

Ref.	Title	Date	Description	Language	Related material
MS 191, fols. 110v–16	Material intended for appendix to <i>Final Causes</i>	c. 1688	Most copied out on BP 9, fols. 35–42 Several sheets endorsed: ‘Tbd’. Hands: Bacon, Greg, Smith	English	See <i>Works</i> , vol. 14, pp. 165–72 (section from fols. 115–16 published on p. 172)
MS 191, fols. 117–18	Original version of part of <i>Christ. Virt.</i> , I. 1688 or later		Paragraph I and first paragraph of II Hand: Smith, corrections by Boyle on 117v	English	<i>Works</i> , vol. 11, p. 333
MS 191, fols. 119–20	Introduction to series of experiments	1688	Hand: Smith	English	
MS 191, fols. 121v–2	Section of text of sequel to ‘Alcali and Acid’ ( <i>Mechanical Qualities</i> ).	Late 1680s	Hand: Smith	English	See <i>Works</i> , vol. 8
MS 191, fol.123	MS version of part of <i>Christ. Virt.</i> , I.	c. 1688	The 12th paragraph from the end of the first part Hand: Smith	English	<i>Works</i> , vol. 11, p. 323
MS 191, fols. 124–30	Parts of theological works, dealing with role of human faculties and natural philosophy in comprehending God, etc.	c. 1688	Fols 124–6 are stubs of torn-out pages; fol. 130 blank Hands: Emes, Greg, Bacon	English	Fols. 128v and 129v published in MacIntosh, 2.1.37, 2.2.35



MS 192: Boyle’s ‘Ethical Elements’

Modern binding; 154 leaves. Paginated to p. 53; foliated thereafter, but numbering remains erratic. Partly written on rectos only, partly on rectos and versos. Ruled margin to pages. Endorsed on front flyleaf ‘New Catalogue No. 42’.

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<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
Pagination/ foliation from 1 to 170	‘The Ethical Elements’	c. 1645	Book 1, chs. 1–3; p. 29 is followed by 3 blank leaves omitted from the pagination Book 2, chs. 1–3 (pp./fols. 30ff.); p. 33 is followed by a blank leaf omitted from the pagination, and p. 46 is followed by 3 blank leaves omitted from the pagination Book 3, false start followed by chs. 1–5 (fols. 74ff., within which the following leaves are blank: fols. 75–6, 82, 90–1, 112, 114, 132–3, 164–5, 167–8) Hand: early Boyle	English	For the relationship of this MS 195, see J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), esp. p. lxviii

MS 193: [Workdiary 18]

Modern binding; foliated; 16 folios. Grey paper wrapper bound in, inscribed on verso ‘Robert Boyle Note-book’ in pencil: 19th-century?

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 193, fols. 1–16	Chymical recipes, mainly involving metals and their transmutation	Late 1650s	Includes ‘Cardans worke to Reduce the Rhenish [gold] into hungarian [gold]’ Fols. 10v–16 blank Hand: uncertain	English	Workdiary 18

**MS 194: [Workdiary 33]**  
**Modern binding; foliated; 25 folios. ‘Robert Boyle Note-book’ in pencil on fol. 1: 19th-century? Fols. 1–10, 22 and part of 25 written from front; fols. 11–25 (except 22 and part of 25) written from back.**

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 194, fols. 1–2	Key to abbreviations and lists of code names, one endorsed ‘From May 1668’	Early 1680s	Hands: C, Boyle	English, Latin	
MS 194, fols. 3–7	Recipes, two of them dated ‘May the 24th [16]80’ and ‘Dec the 3d [16]82’, etc.	Early 1680s	Includes cipher and diagrams on fol. 4v. Fol. 7 blank Hands: Bacon, Boyle, Warr	English, Latin, French	
MS 194, fol. 8	Memoranda for will	Early 1680s	Dated Nov. 26 Hand: Boyle	English	
MS 194, fols. 9–10	Cipher and diagram	Early 1680s	For the cipher, cf. MS 194, fol. 4v Hand: uncertain	Latin	
MS 194, fols. 11–13	Note on arrears etc. of rents, referring to dates in 1682	Early 1680s	Fol. 13 blank Hand: Bacon	English	
MS 194, fols. 14–16	Chemical recipes, one dated ‘Decemb. The 22’	Early 1680s	Fol. 15 blank Hand: Bacon	English	
MS 194, fols. 17–18	‘Bonds Due & now in Mr. Roche his hands’, dated ‘Nov: the 4th 1684’	4 Nov. 1684	List of the amounts of money due from various people. Fol. 18 blank Hand: Boyle	English	
MS 194, fols. 19–21	Chemical recipes, one dated ‘Sept the 19’ and another ‘[September] the 23th’, and list of numbers, perhaps a further cipher	Early 1680s	Hand: Bacon	English, Latin	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 194, fol. 22	Verses concerning chemical processes	Early 1680s	Hand: Bacon	Latin, English	English verses also published in B. Kaplan, ‘ <i>Divulging of Useful Truths in Physick</i> ’ (Baltimore, 1993), p. 48
MS 194, fol. 23v	Note on monies borrowed from Boyle, etc.	1684	Hand: ?Boyle	English	
MS 194, fols. 24–5	Recipes, verse on chemical processes, key to abbreviations and cipher	Early 1680s	Hands: Bacon, B, Greg, ?	English	

**MS 195: Boyle’s ‘Aretology or Ethicall Elements’  
Modern binding; foliated; 238 folios. Ruled margins.**

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 195, fol. 1	Title-page of ‘The Aretology or Ethicall Elements’	1645	Hand: early Boyle Fols. 2–11 blank	English	Published in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), p. 1
MS 195, fols. 12–45	Early version of Book 1, chapters 1–3, and Book 2, chapters 1–2, of ‘The Aretology or Ethicall Elements’	1645	Hand: early Boyle Fols. 46–51 blank	English	See J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), p. 3n
MS 195, fols. 52–231	Complete text of ‘The Aretology or Ethicall Elements’	1645	Hands: early Boyle; John Jay (fols. 54v–5, 56v–7)	English	Published in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), pp. 3–141

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 195, fols. 230v–1v	Notes on fortification	1645	Unconnected to rest of text. Stub of removed text in between, evidently with further related text on verso. Head: early Boyle. Pp 232–8 blank	English	
<b>MS 196: Essays on Sin, Piety and Valour</b> <b>Modern binding; foliated; 71 folios. Ruled margins.</b>					
<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 196, fols. 4–34	‘Of Sin’	Late 1640s	Hand: early Boyle Fols. 34v–7 blank	English	Published in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), pp. 143–68
MS 196, fols. 38–58	‘Of Piety’	Late 1640s	Hand: early Boyle	English	Published in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), pp. 169–83
MS 196, fols. 60–7	‘Of Valour’	Late 1640s	Fols. 60–2 contains sections 1 and 2, but ‘Of Valour’ recommences in a different version on fol. 63 Hand: early Boyle	English	Published in <i>Works</i> , vol. 13, pp. 131–4
<b>MS 197: ‘The Doctrine of Thinking’</b> <b>Modern binding; foliated; 43 folios.</b>					
<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 197, fols. 4–43	‘The Doctrine of Thinking’	Late 1640s	Fols. 1–3 blank except for endorsement ‘Sermon’ on first leaf	English	Published in J.T. Harwood, <i>Early Essays and Ethics</i> (Carbondale, 1991), pp. 185–202

MS 198: Notebook, c. 1680

Modern binding; foliated; 148 folios. Fols. 1–27 written from front; fols. 56v–103 written from back. There are various groups of blank leaves, notably fols. 28–65 (apart from 56v) and 73–91.

Ref.	Title	Date	Description	Language	Related material
MS 198, fols. 3–8	MS version of part of <i>Notion of Nature</i>	c. 1680	Fols. 1–2 blank. Section VII, axiom VI, paragraphs 1–3 and most of 7, with some material deleted (incl. parenthetical paragraphs including material previously on fols. 5v and 6r), some material added later. Lacuna on p. 539 in published version matches passage omitted in Latin editions. Continued in MS 199, fols. 147–9 Hand: Greg	English	<i>Works</i> , vol. 10, pp. 537–40, 541–2, unpublished
MS 198, fols. 9–10	Introductory material for theological treatise	c. 1680	Fol. 10 blank Hand: C	English	
MS 198, fol. 11	MS version of part of <i>Exp. &amp; Obs. Physicae</i>	c. 1680	First part of third paragraph in ‘Advertisement’ to chapter IV Hands: Greg, B	English	<i>Works</i> , vol. 11, p. 398
MS 198, fol. 12	Single sentence about how this book of receipts differs from others	c. 1680	From a discarded version of the preface to <i>Medicinal Experiments</i> Hand: Greg	English	See <i>Works</i> , vol. 12, pp. 180, 209–12
MS 198, fol. 13	Unpublished report about the sky and sea during eruption of Mt Etna in 1670, obtained from ‘A Minister of State’	c. 1680	Perhaps from unpublished part of <i>Exp. &amp; Obs. Physicae</i> Hand: Greg	English	See <i>Works</i> , vol. 11
MS 198, fol. 14	Experiments on quicksilver	c. 1680	Hand: Greg	English	



Ref.	Title	Date	Description	Language	Related material
MS 198, fols. 15–16	Long, unpublished paragraph describing an experiment to time the ascent of a glass bubble in oil and in water, showing that the ball ascended ‘by the Extrusion of the Liquors’ rather than ‘by any positive Levity’ it is purported to possess; in response to an experiment performed by ‘the Learned Signor Rinoldini’	c. 1680	Probably from the planned appendix to <i>Hydrostatistical Paradoxes</i> . Endorsed: ‘Transcribd’ Hand: Greg	English	See <i>Works</i> , vol. 5
MS 198, fol. 17	Unpublished paragraph calling attention to ‘two or three very Ingenious Men’ who defended the Aristotelian <i>horror vacui</i> in spite of their perception that it was not ‘defensible upon the Vulgar Grounds’, and who had ‘of late ... startled some eminent Persons’ with their opinion’	c. 1680	Probably from the planned appendix to <i>Hydrostatistical Paradoxes</i> . Endorsed: ‘Tbd’ Hand: Greg	English	See <i>Works</i> , vol. 5
MS 198, fol. 18	Part of dialogue concerning metalline bodies and note on effect of vinous spirit on ‘Anomalous Gold’	c. 1680	Hand: Greg	English	
MS 198, fols. 19–20	Covering letter for material relating to Boyle’s attack on orthodox medical practice	c. 1680	Hand: Greg	English	Published in M. Hunter, ‘Boyle versus the Galenists’, <i>Medical History</i> , 47 (1997), 322–61, on p. 337; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), p. 173

Ref.	Title	Date	Description	Language	Related material
MS 198, fols. 20v–1	Part of introduction to essay on effects of mechanical laws of motion	c. 1680	Hand: B	English	
MS 198, fol. 22	Theological notes	c. 1680	Brief note to addressee of tract, and notes on miracles Hand: Greg	English	Partly published in MacIntosh, 3.6.8
MS 198, fol. 23	MS version of introduction to <i>Specific Medicines</i>	c. 1680	Stub of torn-out page between fols. 22 and 23, perhaps related to fol. 23 Hand: Greg	English	<i>Works</i> , vol. 10, p. 359
MS 198, fol. 23v	MS version of part of <i>Human Blood</i>	c. 1680	Second paragraph in ‘The II. (Secondary) Title’, lacking final sentence, otherwise as published Hand: Greg	English	<i>Works</i> , vol. 10, pp. 44–5
MS 198, fol. 24	Notes on discriminating false miracles	c. 1680	Hand: Bacon	English	
MS 198, fol. 25–6	Addendum to text of <i>Mineral Waters</i>	c. 1680	Endorsed: ‘This belongs to the 9th title’ Hand: Greg	English	Published in <i>Works</i> , vol. 10, pp. xxxiii–xxxiv
MS 198, fol. 26v	Unpublished paragraph from the introduction to the planned appendix to <i>Hydrostatical Paradoxes</i>	c. 1680	Announcing that it will consist of three parts: experiments showing some effects of air pressure on air and quicksilver; experiments on suction; and some ‘unpublished Experiments, that chanc’d to come to my hands’, ‘thrown together’ in the hope of convincing doubters of the truth of ‘our <i>Hypothesis</i> ’. Endorsed: ‘Tbd’ Hand: Greg	English	See <i>Works</i> , vol. 5

Ref.	Title	Date	Description	Language	Related material
MS 198, fol. 27	Reasons for including some titles of supposedly minor import in the following ‘Scheme’	c. 1680	Hand: Greg Fols. 28–56 blank	English	
MS 198, fol. 56v	Short section of dialogue on alchemy	c. 1680	Hand: ? Fols. 57–65 blank	English	
MS 198, fols. 66–7	MS version of preface to ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	c. 1680	Showing many changes in wording. Copied out in altered form in BP 26, fol. 30; some readings that appear here are lacking there and vice versa. Endorsed ‘Tbd by G[reg]’. Also endorsed: ‘Tbd by R[obert] B[acon] the 2d time’ Hands: Greg (corr. by Boyle on fol. 66v, top left); title: C	English	<i>Works</i> , vol. 10, pp. 305–6, including previously unpublished material
MS 198, fols. 68–72	MS version of part of <i>Final Causes</i>	c. 1680	Section IV, proposition III, paragraphs 8–16, nothing added later except parenthetical phrase about beavers in paragraph 11. Endorsed: ‘Tbd’ Hand: Greg, correc by Boyle	English	<i>Works</i> , vol. 11, pp. 132–5
MS 198, fol. 72v	MS version of part of <i>High Veneration</i>	c. 1680	Second paragraph of point 21, virtually identical with published text Hand: uncertain Fols. 73–91 blank	English	<i>Works</i> , vol. 10, pp. 175–6
MS 198, fols. 92–3	MS version of part of ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	c. 1680	Proposition III, paragraph 27. Some material added later and lower part of marginal addition on fol. 92v not published. Preceding fol. 92 is the stub of a torn-out leaf, hand Greg, perhaps related to fol. 92 Hand: Greg	English	<i>Works</i> , vol. 10, pp. 331–2, where the previously unpublished material is included

Ref.	Title	Date	Description	Language	Related material
MS 198, fols. 93v–7	MS version of ‘Advantages of the Use of Simple Medicines’ ( <i>Specific Medicines</i> )	c. 1680	Sections I, II, III and V, much changed before publication Hand: Greg Fols. 98–102 blank	English	<i>Works</i> , vol. 10, pp. 407–14, 417–20, including previously unpublished material
MS 198, fol. 103	Unpublished passage outlining Boyle’s plan to write ‘the proposed History of the Air’ in several sections	c. 1680	Hand: Greg	English	i.e. <i>General History of Air</i> , see <i>Works</i> , vol. 12
MS 198, fols. 103v–4, 105	Material relating to <i>Aerial Noctiluca</i>	c. 1680	Unpublished observations about how long ivy noctiluca can be kept shining when hermetically sealed in a bolthead, apparently continuing experiments in ‘Additional Observations about the Aerial Noctiluca’, observations XV–XVI, and ‘An Appendix to the Aerial Noctiluca’, section II, experiment V Hand: Greg	English	Published in <i>Works</i> , vol. 9, pp. xxviii–xxx. See also <i>Works</i> , vol. 9, pp. 299, 314
MS 198, fols. 104v–5	Unpublished observation about the colour of blood obtained in a phlebotomy performed in Boyle’s presence on ‘A Lady of a middle age & sanguine Complexion, being afraid of a Relapse into an Inflammatory Distemper’ and observations on phlebotomy from ‘A learned Physician & of great Practice’	c. 1680	Intended for inclusion in second edition of <i>Human Blood</i> , as shown by its being copied in BP 18, fol. 35. Interspersing previous item Hand: Greg	English	See <i>Works</i> , vol. 10; and see Hunter & Knight, <i>Human Blood</i> , pp. xi, 15–16 Cf. BP 18, fol. 35

Ref.	Title	Date	Description	Language	Related material
MS 198, fols. 106–7	MS version of part of ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	c. 1680	Proposition II, final paragraph, almost exactly as published Hand: Greg	English	<i>Works</i> , vol. 10, pp. 320–2
MS 198, fol. 107v	MS version of part of <i>Porosity</i>	c. 1680	‘Porousness of Animal Bodies’, chapter VIII, 1st paragraph, as published Hand: Greg	English	<i>Works</i> , vol. 10, p. 129
MS 198, fols. 108–12	MS version of part of sequel to c. 1680 ‘Salt-Water Sweetned’ ( <i>Phil. Trans.</i> , 1693)		Paragraphs I (fol. 110), VI (fol. 112v), VII (fol. 112v), VIII (fol. 109), IX (fol. 112v–r), X (fols. 112–11v), XII (fol. 111v–r), first part of XIII (fol. 108v), small part of XVII (fol. 109v). Many differences from published version. Text on fol. 108 and most of fol. 109v not published. Paragraphs III, XIV–XVI, XVIII, and most of XIII and XVII omitted in MS. The text on fol. 110 comes first. Torn sheet between fols. 107 and 108 has some text, apparently from this paper Hand: Greg	English	<i>Works</i> , vol. 12, pp. 165–70, 172–4, including previously unpublished material
MS 198, fols. 113–14	Material relating to <i>Final Causes</i> and <i>Human Blood</i>	c. 1680	1 Probably a superseded version of opening paragraph in ‘An Appendix to the Memoirs for the History of Humane Blood’ 2 Section IV, proposition III, paragraphs 1–2 of <i>Final Causes</i> 3 Unpublished paragraph on design of teeth in animals, related to <i>Final Causes</i> Hand: Greg	English	1 See <i>Works</i> , vol. 10, p. 78 2 See <i>Works</i> , vol. 11, p. 130 3 See <i>Works</i> , vol. 11, pp. 136–8, including previously unpublished material
MS 198, fols. 115v–18	Unpublished experiments on air pressure and suction	c. 1680	Probably from the planned appendix to <i>Hydrostatical Paradoxes</i> . Endorsed: ‘Tbd’ Hand: Greg	English	See <i>Works</i> , vol. 5



Ref.	Title	Date	Description	Language	Related material
MS 198, fol. 119	MS version of part of sequel to c. 1680 ‘Salt-Water Sweetened’ ( <i>Phil. Trans.</i> , 1693)	c. 1680	Paragraphs II (fol. 119v), IV (fol. 119v–r), part of V (fol. 119r), VI (fol. 119r). Lacunae on fol. 119v correspond approximately to passage identified in published version as having been ‘deposited with the Secretaries of the Royal Society, An. 1683, sealed up, and opened since the author’s death’. Most of fol. 119r not published Hand: Greg	English	<i>Works</i> , vol. 12, pp. 166–7, including previously unpublished material
MS 198, fols. 120–1	Concerning God’s ends and human understanding	c. 1680	Hand: Greg	English	Copied in BP 7, fol. 116
MS 198, fols. 122–4	Experiments on tincturification; glass of antimony; rectified spirit of wine	c. 1680	Between fols. 121 and 122, stub of torn-out page Hand: Greg	English	
MS 198, fols. 125–32	Unpublished descriptions of ‘the <i>Travelling Baroscope</i> ’ and ‘the <i>Mercurial Syphon</i> ’, with experiments on air pressure and suction carried out with them	c. 1680	Probably from the planned appendix to <i>Hydrostatical Paradoxes</i> . Endorsed: ‘Tbd’ Fols. 133–6 blank. Hand: Greg	English	See <i>Works</i> , vol. 5
MS 198, fols. 137–40	Relationship of miracles to laws of nature	c. 1680	Fol. 140 blank Hand: Greg	English	Fol. 138 published in MacIntosh, 3.6.2
MS 198, fol. 141v	Opening to letter condemning ‘Christian’ attack on virtues admired even among pagans	c. 1680	Hand: ?Greg	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 198, fols. 142v-3	Material relating to <i>Porosity</i>	c. 1680	Outline of topics for first six chapters in 'Porousness of Animal Bodies' Hand: A	English	See <i>Works</i> , vol. 10, pp. 107–24
MS 198, fol. 143v	'A List of my Tracts Relating to c. the Hermetical Philosophy'	1680	Hand: A	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), p. 63
MS 198, fols. 144v–5	List of heads of 'Dialogue on the Transmutation and Melioration of Metals'	c. 1680	Copied in BP 25, p. 305 Hand: A Fols. 145v–8 blank	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), p. 237

**MS 199: Notebook, c. 1680**  
**Modern binding; foliated; 155 folios. Fols. 1–55 written from front; fols. 77–151 written from back. There are various groups of blank leaves, notably fols. 56–76 and 78–113.**

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 199, fols. 3–5	Discarded version of preface to 'Salubrity of the Air' ( <i>Languid Motion</i> )	c. 1680	Fols. 1–2 blank. Opening lines published, the rest (on magnetical effluvia) unpublished. Fols. 4v–5 blank Hand: A	English	<i>Works</i> , vol. 10, pp. 305–6, including previously unpublished material
MS 199, fols. 6–7	Passage concerning efficacy of receipts	c. 1680	Hands: B, Greg	English	
MS 199, fol. 8	Material relating to <i>Hydrostaticalc. Paradoxes</i>	1680	Unpublished sentence fragment, noting that certain objections to Boyle's explanation of the Torricellian experiment 'have been imployd to startle no lesse a virtuoso then his Majesty, & divers of the more curious of his	English	See <i>Works</i> , vol. 5

Ref.	Title	Date	Description	Language	Related material
MS 199, fols. 9–10	Material relating to <i>Hydrostatical Paradoxes</i>	c. 1680	Court? For a revised version, see MS 199, fol. 9 Hand: Greg	English	See <i>Works</i> , vol. 5
MS 199, fols. 11–15	Unpublished account of several experiments with a baroscope and syphon	c. 1680	Stating that Boyle had intended to add ‘a short appendix’ to a planned new edition of this work, but having lately come across MS versions of some experiments from the appendix, he has ‘annexd them’ to a chapter of an unnamed work (apparently unpublished) see further Introductory Note. Endorsed: ‘Tbd’ For a discarded version, see MS 199, fol. 8. Fol. 10 blank Hand: Greg	English	See <i>Works</i> , vol. 5
MS 199, fols. 16–17	MS version of part of <i>Final Causes</i>	c. 1680	Probably from the planned appendix to <i>Hydrostatical Paradoxes</i> . Endorsed: ‘Tbd’ Hand: Greg	English	See <i>Works</i> , vol. 5
MS 199, fols. 17v–18	Unpublished account of an experiment with a baroscope	c. 1680	Section IV, proposition III, paragraphs 5–6, missing only a few words from the published text. Endorsed ‘Tbd’. For a discarded version of paragraph 5, see BP 18, fol. 93 Hand: Greg	English	See <i>Works</i> , vol. 5
MS 199, fols. 18v–19	Notes on precipitations, mineral preparations, etc.	c. 1680	Probably from the planned appendix to <i>Hydrostatical Paradoxes</i> . Endorsed ‘Tbd’ Hand: Greg	English	

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 199, fols. 20–3	Unpublished account of ways to manifest force of the air’s spring audibly	c. 1680	Probably from the planned appendix to <i>Hydrostatical Paradoxes</i> . Endorsed ‘Tbd’. Fol. 23 blank Hand: Greg, corr. by Bacon	English	See <i>Works</i> , vol. 5
MS 199, fol. 24	Superseded version of part of ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	c. 1680	Proposition IV, paragraphs 3–4 Hand: Greg	English	<i>Works</i> , vol. 10, pp. 344–6
MS 199, fols. 25–9	Fragment of ‘Dialogue on the Transmutation and Melioration of Metals’	c. 1680	Hands: unknown, Greg	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 270–3
MS 199, fol. 31	MS version of part of <i>Human Blood</i>	c. 1680	‘An Appendix’ to ‘Titles of the First Order’, first main paragraph, heavily rewritten. Followed by text in MS 199, fols. 127–8 Hand: uncertain	English	<i>Works</i> , vol. 10, pp. 13–14, including previously unpublished material
MS 199, fols. 32–7	MS version of a section of ‘Medica Praescripta Communicata R.B.’	c. 1680	For the text of which this forms part, see BP 17, fols. 1–36 Hand: Greg	English	Published in <i>Works</i> , vol. 14, pp. 308–15
MS 199, fol. 38	MS version of part of <i>Porosity</i>	c. 1680	‘Porousness of Animal Bodies’, chapter V, paragraph 2, as published Hand: Greg	English	<i>Works</i> , vol. 10, p. 120
MS 199, fols. 38v–41	MS version of part of <i>Porosity</i>	c. 1680	‘Porousness of Animal Bodies’, chapter V, paragraphs 6–8 (the latter on fol. 41v), and all of chapter VI, as published Hand: Greg	English	<i>Works</i> , vol. 10, pp. 121–4
MS 199, fols. 42–3	MS version of part of <i>Porosity</i>	c. 1680	‘Porousness of Solid Bodies’, chapter VI, final paragraph, as published Hand: Greg	English	<i>Works</i> , vol. 10, pp. 140–1

Ref.	Title	Date	Description	Language	Related material
MS 199, fol. 44	‘The summary of my opinion about the receiv’d method & practis of Phisick’	c. 1680	Hand: ?Emes	English	Published in M. Hunter, ‘Boyle versus the Galenists’, <i>Medical History</i> , 47 (1997), 345–6; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 182–3
MS 199, fols. 46–55	Fragment of ‘Dialogue on the Transmutation and Melioration of Metals’	c. 1680	Hand: Emes Fols. 56–76 blank	English	Published in L. Principe, <i>The Aspiring Adept</i> (1998), pp. 273–7
MS 199, fol. 77	MS version of part of <i>General History of Air</i>	c. 1680	Final paragraph in preface Hand: Emes Fols. 78–113 blank	English	<i>Works</i> , vol. 12, pp. 10–11
MS 199, fols. 114v–20	Section of text from Boyle’s ‘Considerations & Doubts Touching the Vulgar Method of Phisick’	c. 1680	Hand: Greg	English	Published in M. Hunter, ‘Boyle versus the Galenists’, <i>Medical History</i> , 47 (1997), 355–61; M. Hunter, <i>Robert Boyle: Scrupulosity and Science</i> (Woodbridge, 2000), pp. 193–201
MS 199, fol. 120v	Note on weight of ‘oculus mundi’ (incomplete)	c. 1680	Hand: Greg	English	
MS 199, fol. 121	Fragment of ‘Dialogue on the Transmutation and Melioration of Metals’	c. 1680	Hand: Greg	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), pp. 269–70
MS 199, fol. 122	Characteristics of mineral waters	c. 1680	Stubs of two torn-out pages between fols. 121 and 122 Hand: Greg	English	



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
MS 199, fols. 123v–4	MS versions of parts of <i>Final Causes</i> and <i>High Veneration</i>	c. 1680	1. Section IV, proposition III, paragraph 7 of <i>Final Causes</i> . Endorsed ‘Tbd’ 2. Point 26 of <i>High Veneration</i> Hand: Greg	English	1. <i>Works</i> , vol. 11, p. 132 2. <i>Works</i> , vol. 10, pp. 179–80
MS 199, fols. 124v–6	Notes on miracles and the natural order	c. 1680	Hand: Greg	English	Published in MacIntosh, 3.6.7
MS 199, fols. 127–8	MS version of part of <i>Human Blood</i>	c. 1680	‘An Appendix’ to ‘Titles of the First Order’, rest of text after first main paragraph, heavily rewritten. Preceded by text on fol. 31 Hand: Greg	English	<i>Works</i> , vol. 10, pp. 14–15, including previously unpublished material
MS 199, fol. 129	List of Heads concerning the Gall	c. 1680	Hand: Greg	English	See BP 18, fol. 47, and Hunter & Knight, <i>Human Blood</i> , pp. xiv, 32
MS 199, fols. 129v–30	MS version of part of <i>Final Causes</i>	c. 1680	Section IV, proposition III, paragraphs 18–26, many changes prior to publication. Endorsed: ‘Tbd’ Hand: Greg	English	<i>Works</i> , vol. 11, pp. 136–8
MS 199, fol. 131	Letter concerning the loss, by ‘Chance (or which is more likely) Fraud’, of ‘the Manuscript about the Examen & Improvement of the <i>Materia Medica</i> ’	c. 1680	Some overlap with ‘Previous Hydrostatical Way of Estimating Ores’ ( <i>Medicina Hydrostatica</i> ), section I, opening paragraph; however, it could relate to a different, otherwise unpublished work Hand: Greg, corr. by Boyle	English	See <i>Works</i> , vol. 11, p. 257
MS 199, fol. 132	MS version of part of <i>Final Causes</i>	c. 1680	Section IV, proposition III, paragraphs 18–26: beginning of text completed on fols. 129v–30. Endorsed: ‘Tbd’ Hand: Greg	English	<i>Works</i> , vol. 11, pp. 136–8

Ref.	Title	Date	Description	Language	Related material
MS 199, fol. 132v–3	MS version of part of <i>General History of Air</i>	c. 1680	Title 40, last 4 paragraphs except final sentence about a mouse. Instead, the beginning of the extract from his notebooks is repeated and deleted Hand: Greg	English	<i>Works</i> , vol. 12, pp. 155–6
MS 199, fols. 134–6	Notes on barometric observation and on amalgamating gold	c. 1680	Hand: Greg	English	
MS 199, fols. 137v–8	Notes on miracles and the natural order	c. 1680	Hand: Greg, with addns by B	English	Copied in BP 7, fols. 112, 117
MS 199, fols. 139–42	MS version of part of ‘Salubrity of the Air’ ( <i>Languid Motion</i> )	c. 1680	Concluding paragraph and the following four experiments. First part of concluding paragraph not in MS, and some of the rest of this paragraph reworded prior to publication; four experiments almost exactly as published Hand: Greg	English	<i>Works</i> , vol. 10, pp. 346–9
MS 199, fol. 143	Note on ordering of ensuing text	c. 1680	Hand: Greg	English	
MS 199, fol. 144	Note on strange change of colour in New England pond	c. 1680	Hand: Greg	English	Published in <i>Of Subterranean Steams</i> , <i>Works</i> , vol. 13, p. 412
MS 199, fol. 145	Further notes on miracles	c. 1680	Between fols. 145 and 146 is the stub of a torn-out leaf; hand: B, and probably belonging with fol. 145 Hand: B	English	
MS 199, fol. 146	Report by Duke of York concerning ague in Scotland	c. 1680	Hand: Greg	English	

Ref.	Title	Date	Description	Language	Related material
MS 199, fol. 147	List of characters in ‘Dialogue on the Transmutation and Melioration of Metals’	c. 1680	Hand: Greg	English	Published in L. Principe, <i>The Aspiring Adept</i> (Princeton, 1998), p. 235
MS 199, fols. 147v–9v	MS version of part of <i>Nation of Nature</i>	c. 1680	Section VII, axiom VI, paragraph 4 to start of paragraph 7. Ends abruptly on folio 147v. Continuation of MS 198, fols. 3–8 Hand: Greg	English	<i>Works</i> , vol. 10, pp. 540–1
MS 199, fol. 150	MS version of part of <i>Nation of Nature</i>	c. 1680	Section VII, axiom VI, paragraph 17, interspersed with material on BP 18, fols. 106 and 109. Contains lacuna that matches passage omitted in Latin editions Hand: Greg	English	<i>Works</i> , vol. 10, pp. 548–9
MS 199, fol. 151	Prescription for writing history of a disease, and note	c. 1680	Hand: B Fols. 152–5 blank	English	

**MS 200: Catalogue of Boyle’s mineral collection**  
**Modern binding, with marbled paper cover bound in; foliated; 16 folios.**

Ref.	Title	Date	Description	Language	Related material
MS 200, fols. 1–10	List of minerals in Boyle’s collection, in alphabetical order	c. 1692	Hand: ?Henry Hunt (see fol. 1) Fols. 10v–16 blank	English	



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# The Boyle Letters

## Volume 1

Correspondence A–B. At the start is a typed inventory of the volume’s contents. Date: 20th century. Also bound in are two manuscript lists of 19th-century date, one describing a different ordering of the letters from the current one.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 1, fols. 1–2	Johannes Georg Steigerthal to Boyle	? 1691	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 340–1
BL 1, fols. 3–6	W. Anderson to Master Jameson	30 Sept. 1644	Original letter. 4 leaves (2 conjugate pairs), 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 415
BL 1, fols. 7–8	‘Anselm’ to Boyle	[Assigned to late Dec. 1680]	Original letter. 2 leaves, fol. ?	English	Published in <i>Correspondence</i> . vol. 5, pp. 230–1
BL 1, fols. 9–10	Jonathan Avery to Boyle	29 March 1688	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 255–6
BL 1, fol. 11	Henry Ashhurst to Boyle	2 Nov. 1665	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 573–4
BL 1, fols. 12–13	Henry Ashhurst to Boyle	24 Oct. 1666	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 3, pp. 257–8
BL 1, fols. 14–15	Henry Ashhurst, jr., to Boyle	28 August 1683	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 423–4
BL 1, fols. 16–17	Ralph Austen to Boyle	14 Jan. 1665	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 450–1



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 1, fols. 18–19	Ralph Austen to John Beale	28 Jan. 1666	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 415
BL 1, fols. 20–21	W. Aston to Boyle	Late 17th century	Acrostic in Greek. 2 leaves, fol.	Greek	Published in <i>Correspondence</i> , vol. 6 pp. 363–4
BL 1, fols. 22–3	Jo. V. Baird to Laird of Howshill	2 March 1679	Original letter. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, pp. 415–16
BL 1, fol. 24	Cardinal Francis Barberini to Father James Taafe	29 August 1668	Copy. 1 leaf, fol.	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 416
BL 1, fols. 25–6	Thomas Barlow to Boyle	18 April 1667	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 306–7
BL 1, fol. 26a	Robert Sanderson to Thomas Barlow	20 Sept. 1659	Fragment of original letter, the rest of which has been cut away. 1 leaf (part only)	English	Published in <i>Correspondence</i> , vol. 1 pp. 401–2
BL 1, fols. 27–8	Thomas Barlow to Boyle	30 Jan. 1660	Original letter. 2 leaves, 4o?	English	Published in <i>Correspondence</i> . vol. 1, pp. 400–1
BL 1, fols. 29–30	Thomas Barlow to Boyle	13 Sept. 1659	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 370–1
BL 1, fols. 31–2	Richard Baxter to Boyle	20 Oct. 1660	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, p. 435
BL 1, fols. 33–4	Richard Baxter to Boyle	14 June 1665	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 473–8
BL 1, fols. 35–6	Richard Baxter to Boyle	29 August 1682	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 332–3

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 1, fols. 37–8	Richard Baxter to Boyle	15 Dec. [1668]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 124–6
BL 1, fols. 39–40	Pierre Bayle to Boyle	6 June 1686	Original letter. 2 leaves, 8o	French	Published in <i>Correspondence</i> , vol. 6, pp. 178–80
BL 1, fols. 41–6	John Beale to Boyle (with enclosures)	30 Nov. 1663	Original letter. 6 leaves (3 conjugate pairs), fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 211–21
BL 1, fols. 47–8	John Beale to Katherine Jones, Viscountess Ranelagh	5 Sept. 1660	Scribal copy. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, p. 416
BL 1, fols. 49–50	John Beale to Katherine Jones, Viscountess Ranelagh	6 Sept. 1660	Scribal copy. 2 leaves, fol.		Summarised in <i>Correspondence</i> , vol. 6, p. 416. Copy in HP 66/29/1A
BL 1, fols. 51–2	John Beale to Benjamin Worsley	29 August 1660	Scribal copy. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 416
BL 1, fols. 53–4	Newsletter from Amsterdam	16 August 1661, etc	Scribal copy. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 416
BL 1, fols. 55–6	Newsletters from Cleves and Amsterdam	4 March 1661, 5 May 1661	Scribal copies. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 416. Part of second item also in HP 4/4/16A
BL 1, fols. 57–8	Johann Joachim Becher to Henry Oldenburg	26 Oct. 1671	Original letter. 2 leaves, 4o	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 416. Published in <i>Oldenburg</i> , vol. 8, pp. 303–4
BL 1, fols. 59–61	Michael Behm to Boyle	2 Oct. 1668	Original letter. 3 leaves (a conjugate pair and a single leaf), fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 103–14

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 1, fols. 62–3	George, 1st Earl of Berkeley, to Boyle	29 Sept. 1680	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, p. 210
BL 1, fols. 64–5	Isaac [?] de Longuevil to Boyle	Early 1680s [possibly before Sept. 1682]	Original letter. 2 leaves, 4o.	French	Published in <i>Correspondence</i> , vol. 5, pp. 333–5
BL 1, fols. 66–7	Edward Bernard to Boyle	5 May 1680	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, p. 198
BL 1, fol. 68	Edward Bernard to Boyle	17 Sept. 1684	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 41–2
BL 1, fols. 69–70	Edward Bernard to Boyle	24 Feb. 1684	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 7–8
BL 1, fols. 71–2	Edward Bernard to Boyle	15 Jan. 1681	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 237–8
BL 1, fol. 73	Edward Bernard to Boyle	18 Oct. 1680	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 5, p. 211
BL 1, fols. 74–5	Edward Bernard to Boyle	1 Feb. 1691	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 325–6
BL 1, fols. 76–7	Silvius Boccone to John Ray	4 Dec. 1688 NS: i.e. 24 Nov. OS	Original letter. 2 leaves, 4o	French	Summarised in <i>Correspondence</i> , vol. 6, p. 416

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 1, fols. 78–9	Silvius Boccone to John Ray	13 May 1685 NS: i.e. 3 May 1685 OS	Original letter. 2 leaves, 4o	French	Summarised in <i>Correspondence</i> , vol. 6, p. 416
BL 1, fols. 80–7	Various notes and messages to Charles Howard and others enclosed with previous item	13 May 1685 NS: i.e. 3 May 1685 OS.	Enclosures. 8 leaves (the first 4 forming 2 conjugate pairs, the latter 4 separate leaves), fol.	French	Summarised in <i>Correspondence</i> , vol. 6, p. 416.
BL 1, fols. 88–9	Olaus Borrichius to Boyle	30 March 1664	Original letter. 2 leaves, 4o?	Latin	Published in <i>Correspondence</i> , vol. 2, pp. 254–66
BL 1, fols. 90–7	J. [or ‘Signor’?] Boyd to ‘Madame’	Late 17th century	Original letter. 8 leaves, stitched together as a paper book, fol.	French	Summarised in <i>Correspondence</i> , vol. 6, p. 416
BL 1, fols. 98–9	Charles Boyle to Boyle	31 July [1690]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 308–9
BL 1, fols. 100–1	William Boyle to Boyle	14 May 1668	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 74–6
BL 1, fol. 102	[Enclosure with Desqueville to Boyle, 12 September 1678 NS]	[1678]	Note on medicinal water. 1 leaf, 4o	French	See BL 2, fols. 119–20. Published in <i>Correspondence</i> , vol. 5, pp. 125–6
BL 1, fols. 103–4	Boyle to Katherine Jones, Viscountess Ranelagh	13 Nov. [?1648]	Scribal version. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 75–6
BL 1, fols. 105–6	Boyle to Narcissus Marsh	18 April 1682	Draft in Warr’s hand. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 291–3
BL 1, fols. 107–8	Boyle to ‘Mr. N’	c. 1690	Copy in Bacon’s hand. 2 leaves, fol.	English	Another copy in BL 1, fols. 130–1. Published in <i>Works</i> , vol. 12, pp. 364–6

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 1, fols. 109–10	Boyle to Mrs Dury	15 April 1647	Holograph document. 2 leaves, fol.	English	Published in <i>Works</i> , vol. 13, pp. 55–60
BL 1, fol. 111	Boyle to Sir John Champanty	9 April 1681	Scribal copy. 1 leaf, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 251–2
BL 1, fols. 112–15	Boyle to Henry Jones, Bishop of Meath	[27 Sept. 1681]	Version in hand C. 4 leaves (2 conjugate pairs folded together), 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 268–71
BL 1, fols. 116–17	Boyle to John Mallet	23 Sept. 1653	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 145–7
BL 1, fols. 118–19	Boyle to Martha Carey, Countess of Monmouth	7 July 1648	Retained copy in Boyle’s early hand. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 73–5
BL 1, fols. 120–1	Boyle to [Katherine Jones, Viscountess Ranelagh]	31 August 1649	Scribal version. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 82–3
BL 1, fols. 122–3	Boyle to [Roger Boyle, Baron Broghill]	20 Dec. 1649	Scribal version. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 84–6
BL 1, fols. 124–5	Boyle to Katherine Jones, Viscountess Ranelagh	13 May 1648	Scribal copy. 2 leaves, fol.	English	Published in <i>Correspondence</i> vol. 1, pp. 67–9
BL 1, fols. 126–7	Boyle to [Henry More]	? Late 1660s	Hand E. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 157–8
BL 1, fols. 128–9	Boyle to Katherine Jones, Viscountess Ranelagh	2 August 1649	Scribal version. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 79–82
BL 1, fols. 130–1	Boyle to ‘Mr. N’	c. 1690	Hand: Bacon. 2 separate leaves, fol.	English	Another copy in BL 1, fols. 107–8. Published in <i>Works</i> , vol. 12, pp. 364–6



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 1, fols. 132–3	Boyle to James Kirkwood	5 March 1688	Hand: Warr. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 251–3
BL 1, fol. 134	Boyle to Gilbert Burnet, 10 July 1686	c. 1740	Partial copy by Henry Miles. 1 leaf, 4o	English	See BL 6, fol. 52. Published in <i>Correspondence</i> , vol. 6, pp. 188–90
BL 1, fols. 135–6	Boyle to Richard Boyle, 2nd Earl of Cork	14 July 1646	Retained copy in Boyle’s early hand. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, p. 35
BL 1, fols. 137–8	Boyle to ‘Prince of the Round Table’	18 April 1647	Holograph document. 2 leaves, fol.	English	Published in <i>Works</i> , vol. 13, pp. 61–4
BL 1, fols. 139–40	Boyle to Henry Jones, Bishop of Meath	8 or 19 April 1681	Hand: Warr. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 249–51
BL 1, fols. 141–2	Boyle to Alice Boyle, Countess of Barrymore	21 Dec. 1649	Scribal version. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 86–7
BL 1, fols. 143–4	Boyle to John Mallet	January 1653	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 139–42
BL 1, fol. 145	Boyle to Narcissus Marsh	1 August 1682	Hand: Greg. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 316–18
BL 1, fols. 146–7	MS of Boyle’s ‘Invitation to Free Communication’	? 1649	2 leaves, fol.	English	Published in <i>Works</i> , vol. 1, pp. 1–12
BL 1, fol. 148	Boyle to Corporation for Propagating the Gospel	22 August 1689	Hand: Greg. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 296–8
BL 1, fols. 149–50	Boyle to Edward Bernard	15 Nov. 1679	Partial draft in hand of Warr. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 168–70

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 1, fol. 151	Note by Henry Miles	c. 1740	1 leaf, 4o	English	Summarised in <i>Correspondence</i> , vol. 5, p. 168n
BL 1, fols. 152–3	Boyle to Margaret Boyle, Countess of Orrery	c. Oct. 1679 [after 16 Oct. 1679, when Orrery died]	Version in hand B. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 164–5
BL 1, fols. 154–5	Boyle to M. S. R. [My Sister Ranelagh]	1660s	Discarded version of preface to <i>Reason and Religion</i> Hand E. 2 leaves, fol.	English	Published in <i>Works</i> , vol. 8, pp. xxvi–xxviii
BL 1, fols. 156–7	Boyle to [?]	1640s	Holograph document. 2 leaves, fol.	English	Published in <i>Works</i> , vol. 13, p. 94
BL 1, fols. 158–9	Boyle to Michael Boyle, Bishop of Cork	27 May 1662	Draft in hand D. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 22–5
BL 1, fols. 160–1	Boyle to Thomas Barlow	7 July 1681	Hand: Warr. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 257–9
BL 1, fols. 162–3	Boyle to [Benjamin Worsley]	[Late Feb. 1647]	Retained copy in Boyle’s early hand. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 47–9
BL 1, fols. 164–5	William Brereton to Boyle	9 May 1664	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 2, pp. 274–6
BL 1, fols. 166–7	Richard Boyle, 1st Earl of Burlington, to Boyle	24 August 1681	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 262–3
BL 1, fols. 168–9	J. Buryer to Boyle	Late 17th century	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 364–6

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 1, fol. 170	Gilbert Burnet to Boyle, 4 June 1686	c. 1740	Copy by Henry Miles of BL 1, fols. 174–5. 1 leaf, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 181–2
BL 1, fol. 171	Gilbert Burnet to Boyle, 10 January [1691]	c. 1740	Copy by Henry Miles of BL 1, fols. 176–7. 1 leaf, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 324–5
BL 1, fols. 172–3	Gilbert Burnet to Boyle	3 January [1687]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, p. 203
BL 1, fols. 174–5	Gilbert Burnet to Boyle	14 June 1686 NS: i.e. 4 June 1686 OS	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 181–2
BL 1, fols. 176–7	Gilbert Burnet to Boyle	10 January [1691]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 324–5

Volume 2

Correspondence C–E. At the start is a typed inventory of the volume’s contents. Date: 20th century. Also bound in are two manuscript lists of 19th-century date, one describing a different ordering of the letters from the current one.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fols. 1–2	William Chamberlayne to Boyle	5 August 1665	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 501–3
BL 2, fols. 3–4	Hugh Chamberlen to Joseph Williamson	17 Jan. 1666	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, p. 28
BL 2, fols. 5–6	Hugh Chamberlen to Boyle	17 Jan. 1666	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 19–21

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fols. 7–10	Hugh Chamberlen, ‘An Essay of the Plague’, with covering letter to Boyle	17 Jan. 1666	4 leaves (2 conjugate pairs folded together), fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 21–8
BL 2, fol. 11	J. Chardin to ‘Madame’	8 Sept. 1681	Original letter. 1 leaf, 4o.	French	Summarised in <i>Correspondence</i> , vol. 6, p. 416
BL 2, fol. 12	Caleb Cheeshah-teaumuk to [New England Company]	[1663]	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 2, pp. 168–70
BL 2, fol. 13	Samuel B. Chylinski to Boyle	1 June 1660	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 412–13
BL 2, fol. 13a	Elizabeth MacCarthy, Countess of Clancartie, to Boyle	19 Nov. [1677]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 468–9
BL 2, fols. 14–15	Walter Clark to Boyle	25 Oct. 1680	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 5, pp. 211–19
BL 2, fol. 16	Gabriel Clauder to Boyle	1 July 1678	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 5, pp. 103–7
BL 2, fol. 17	Frederick Clodius to Boyle	12 Dec. 1663	Original letter. 1 leaf, 4o	Latin	Published in <i>Correspondence</i> . vol. 2, pp. 229–30
BL 2, fol. 17a	Frederick Clodius to Boyle	3 March 1656	Original letter. 2 leaves, 4o. Includes ‘Extract. Litter. ad me ex Germania Transmissarum’.	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 195–8
BL 2, fols. 18–19	Frederick Clodius to Boyle	7 July 1657	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 222–5

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fol. 19a	Frederick Clodius to Boyle	c. 1658	Original letter. 1 leaf, 4o	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 297–9
BL 2, fol. 20	Boyle to Frederick Clodius	27 Sept. [1653]	Scribal version. 1 leaf, fol. With note by Henry Miles	English	Published in <i>Correspondence</i> , vol. 1, pp. 148–50
BL 2, fols. 21–2	Robert Codrington to Boyle	2 Oct. 1660	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 414–15. See also <i>ibid.</i> pp. 415–26, and BP 35, fols. 210v–12, BP 36, fols. 42v–4
BL 2, fols. 23–8	Robert Codrington to Boyle [inc. verses by Codrington]	22 Dec. 1664	Original letter. 6 leaves (3 conjugate pairs), fol.	English, Latin	Published in <i>Correspondence</i> , vol. 2, pp. 442–7
BL 2, fols. 29–30	Samuel Colepresse to Boyle	26 April 1667	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 308–11
BL 2, fol. 31	Samuel Collins to Boyle	11 Nov. 1668	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 116–18
BL 2, fol. 32	Samuel Collins to Boyle	20 Nov. 1663	Original letter. 1 small piece of paper.	English	Published in <i>Correspondence</i> , vol. 2, pp. 205–7
BL 2, fols. 33–4	Samuel Collins to Boyle	? Summer 1663	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 92–4
BL 2, fols. 35–6	Cuninghame to Boyle	25 June 1686	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 184–5
BL 2, fols. 37–8	Richard Cony to Boyle	24 Oct 1670	Original letter. 2 leaves, fol.	English	See also BL 6, fol. 96. Published in <i>Correspondence</i> , vol. 4, pp. 194–5



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fols. 39–40	John Cooke to Boyle	13 August 1664	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 296–7
BL 2, fols. 41–2	Michael Boyle, Bishop of Cork, to Boyle	13 August 1662	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 41–3
BL 2, fols. 43–4	Edward Wetenhall, Bishop of Cork and Ross, to Boyle	12 June 1683	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 412–13
BL 2, fols. 45–6	Edward Wetenhall to Boyle	22 March 1688	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 253–4
BL 2, fol. 47	Richard Boyle, 1st Earl of Cork, to ‘Mr. Sheriffe’	18 Feb. 1632	Original letter. 1 leaf, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 416
BL 2, fols. 48–9	Elizabeth Boyle, Countess of Cork, to Boyle	26 June [1657] [year surmised]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 219–20
BL 2, fols. 50–1	Cottereaux to Boyle	16 Sept. 1687 NS: i.e. 6 Sept. 1687 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 232–4
BL 2, fols. 52–3	Daniel Coxle to Boyle	6 Nov. [1665]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 576–9
BL 2, fols. 54–7	Daniel Coxle to Boyle	19 Jan. 1666	Original letter. 4 leaves (2 conjugate pairs), fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 30–44
BL 2, fols. 58–61	Daniel Coxle to Boyle	5 Feb. 1666	Original letter. 4 leaves (2 conjugate pairs), fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 51–63

<i>Boyle Letters</i>					
<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fol. 62	Daniel Coxse to Boyle	19 Feb. 1666	Original letter. 1 leaf, fol.	English	Belongs with BL 2, fols. 78–9
BL 2, fol. 63	Note by Henry Miles	c. 1740	Note by Henry Miles about letters relating to Valentine Greatrakes. 1 leaf, 8o	English	
BL 2, fols. 64–5	Daniel Coxse to Boyle	5 March 1666	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 82–90
BL 2, fols. 66–7	Daniel Coxse to Boyle	7 Nov. 1666	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 264–8
BL 2, fols. 68–9	Daniel Coxse to Boyle	14 Oct. [1666]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 247–51
BL 2, fols. 70–1	Daniel Coxse to Boyle	Late 1666 [date surmised: before 2 Nov. 1666]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 262–3
BL 2, fols. 72–3	Daniel Coxse to Boyle	c. August 1666	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 211–17
BL 2, fols. 74–5	Daniel Coxse to Boyle	c. June 1666	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 177–82
BL 2, fols. 76–7	Daniel Coxse to Boyle	[March 1666] [date surmised]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 132–7
BL 2, fols. 78–9	Daniel Coxse to Boyle	19 Feb. 1666	Original letter. 2 leaves, fol.	English	Belongs with BL 2, fol. 62. Published in <i>Correspondence</i> , vol. 3, pp. 69–77

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fols. 80–1	Thomas Coxe to Boyle	8 Feb. 1668	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 25–7
BL 2, fol. 82	Johann Daniel Krafft to Boyle	[Late 1677]	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 482–4
BL 2, fols. 83–4	Ralph Cudworth to Boyle	27 May 1664	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 276–7
BL 2, fols. 85–6	Ralph Cudworth to Boyle	16 Oct. 1684	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 48–9
BL 2, fol. 87	Robert Cuninghame to Boyle	2 Nov. 1664	Original letter. 1 leaf, fol.	English, Latin	Published in <i>Correspondence</i> , vol. 2, pp. 379–82
BL 2, fols. 88–9	Frederick Clodius to [Benjamin Worsley]	[1652–1654]	Original letter. 2 leaves, fol.	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 417. Also extant in HP 42/1/36A–37A
BL 2, fols. 90–1	Thomas Osborne, 1st Earl of Danby to Ralph Montagu, Ambassador at Paris	17 Jan. 1678	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 417
BL 2, fols. 92–3	de Bois Clair to Boyle	31 March [unknown year] NS: i.e. 21 March [unknown year] OS	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 366–8
BL 2, fols. 94–5	F.D. de Breval to Boyle	22 Oct. 1668	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 4, pp. 114–16

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fols. 96–7	Donato Coppola, Duke of Canzano, to Boyle	5 May 1690 NS: i.e. 25 April 1690 OS	Original letter. 2 leaves, fol.	Spanish	Published in <i>Correspondence</i> , vol. 6, pp. 302–4
BL 2, fols. 98–9	de Chambrun to unknown correspondent	4 June 1688	Transcript by Bacon. 2 leaves, fol.	French, (Latin attachment)	Summarised in <i>Correspondence</i> , vol. 6, p. 417.
BL 2, fols. 100–1	Carolus de Clermont to Boyle	[1685?]	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 152–4
BL 2, fols. 102–3	de Court to Boyle	3 August 1688 NS: i.e. 25 July 1688 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 261–3
BL 2, fol. 104	Gideon de Laune to an unknown correspondent 11 July 1639	c. 1668	Copy by Charles Goodall. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 122–4. See also BL 3, fols. . 19–20
BL 2, fols. 105–6	Benjamin Denham to Boyle	12 May 1667	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 314–15
BL 2, fols. 107–8	Benjamin Denham to Boyle	? 1667 [date surmised: before end of Aug. 1667?]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 328–9

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fols. 109–10	Benjamin Denham to Boyle	? 1667 [date surmised: before end of Aug. 1667?]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 326–8
BL 2, fols. 111–12	de Sage to Boyle	2 May 1668 NS: i.e. 22 April 1668 OS	Original letter. 2 leaves, 4o?	French	Published in <i>Correspondence</i> , vol. 4, pp. 71–2
BL 2, fols. 113–14	de Saingermain to Boyle	25 Jan. 1683 NS: i.e. 15 Jan. OS.	Original letter. 2 leaves, 4o?	French	Published in <i>Correspondence</i> , vol. 5, pp. 379–83
BL 2, fols. 115–16	de Saingermain to Boyle	22 Jan. 1685 NS: ie. 12 Jan. 1685 OS	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 96–9
BL 2, fols. 117–18	de Saingermain to Boyle	11 May [1680] NS: i.e. 1 May [1680] OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 193–8
BL 2, fols. 119–20	Descqueville to Boyle	22 Sept. 1678 NS: i.e. 12 Sept. 1678 OS.	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 121–4. For enclosure with this letter, see BL 1, fol. 102



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fols. 121–2	Daniel Des Fontaines to Boyle	25 June 1671	Original letter. 2 leaves, 8o	French	Published in <i>Correspondence</i> , vol. 4, pp. 211–14
BL 2, fol. 123	Desportes to Boyle	Late 17th century	Original letter. 1 leaf, fol.	French	Published in <i>Correspondence</i> , vol. 6, p. 369
BL 2, fols. 124–5	Paul D’Huilleipp to Boyle	10 August 1687	Original letter. 2 leaves, fol.	French	Published in <i>Correspondence</i> , vol. 6, pp. 230–2
BL 2, fols. 126–7	Kildare Digby to Boyle	c. 1661	Original letter. 2 leaves. 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 475–6
BL 2, fols. 128–9	G. Dinotius to Boyle	Late 17th century	Original letter 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 370–1
BL 2, fols. 130–1	François Aignan (Père Tranquille D’Orleans) and Henri Rousseau de Montbazon to Henri Justel	c. 1678	Transcript by Bacon. 2 leaves, fol.	French	Published in <i>Correspondence</i> , vol. 6, pp. 440–5
BL 2, fol. 132	Jean de Marsigny to Boyle	14 April 1668	Original letter. 1 leaf, fol.	French	Published in <i>Correspondence</i> , vol. 4, pp. 69–71
BL 2, fols. 133–4	Daniel Duncan to Boyle	Late 17th century	Original letter. 2 leaves, 8o	French	Published in <i>Correspondence</i> , vol. 6, pp. 371–3
BL 2, fols. 135–6	Daniel Duncan to Boyle	30 July 1688 NS: i.e. 20 July 1688 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 260–1
BL 2, fols. 137–8	Louis du Moulin to Boyle	11 March 1680	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 190–1

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fols. 139–40	Louis du Moulin to Boyle	[1675]	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 4, pp. 405–6
BL 2, fols. 141–2	Peter du Moulin to Boyle	14 July 1661 NS: i.e. 4 July 1661 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 1, pp. 455–7
BL 2, fols. 143–4	Peter du Moulin to Boyle	3 July 1671	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 215–16
BL 2, fols. 145–6	Peter du Moulin to Boyle	23 Feb. 1674	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 381–3
BL 2, fols. 147–8	Peter du Moulin to Boyle	1 Oct. 1673	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, 361–2
BL 2, fols. 149–50	John Dury to Samuel Hartlib	[25 August 1655]	Scribal copy. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, 417. See HP 4/3/121A–B
BL 2, fols. 151–2	Eccard Leichner to Boyle	23 Dec. 1679	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 5, 173–6
BL 2, fols. 153–4	John Eliot to Boyle	26 August 1664	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 305–6
BL 2, fols. 155–6	John Eliot to Boyle	30 Sept. 1670	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 187–9
BL 2, fols. 157–8	John Eliot to Boyle	23 Oct. 1677	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 463–5

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 2, fols. 159–60	John Eliot to Boyle	4 Nov. 1680	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 221–3
BL 2, fols. 161–2	John Eliot to Boyle	15 March 1683	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 391–3
BL 2, fols. 163–4	John Eliot to Boyle	27 Nov. 1683	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 434–5
BL 2, fols. 165–6	John Eliot to Boyle	22 April 1684	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 14–17. See also BL 2, fols. 171–2
BL 2, fol. 166a	John Eliot to Boyle	29 August 1686	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 190–1
BL 2, fols. 167–8	John Eliot to Boyle	21 June 1683	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 413–14
BL 2, fols. 169–70	John Eliot to Boyle	7 July 1688	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> . vol. 6, 258–9
BL 2, fols. 171–2	John Eliot to Boyle	22 April 1684	Copy by Bacon of BL 2, fols. 165–6. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 14–17
BL 2, fols. 173–4	John Ellys to Boyle	26 Oct. 1688	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 275–6
BL 2, fols. 175–6	John Endecott to Boyle	19 Oct. 1664	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 354–6
BL 2, fols. 177–8	John Endecott to Boyle	9 Nov. 1664	Original letter. 2 leaves, fol. Duplicate version of above (with different date)	English	See <i>Correspondence</i> , vol. 2, pp. 354n., 394

Volume 3

Correspondence F–I. At the start is a typed inventory of the volume’s contents. Date: 20th century. Also bound in are two manuscript lists of 19th-century date, one describing a different ordering of the letters from the current one.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fols. 1–2	Nicolas Fatio de Duillier to Boyle	18 May 1691	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 332–3
BL 3, fol. 3	Christian Werner to Boyle	9 Sept. 1678	Original letter. 1 leaf, fol.	Dutch	Published in <i>Correspondence</i> , vol. 5, pp. 118–20
BL 3, fols. 4–5	Petrus Figulus to unknown correspondent	6 Febr. 1660 NS: i.e. 28 Jan. 1660 OS.	Scribal extract. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 417
BL 3, fols. 6–7	George, Patriarch of Antioch, to Boyle	24 Dec. 1677 NS: i.e. 14 Dec. 1677 OS	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 475–9
BL 3, fols. 8–9	George, Patriarch of Antioch, to Boyle	8 Feb. [1678] NS: i.e. 29 Jan. [1678] OS	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 5 pp. 17–19
BL 3, fol. 10	Glangerman to Henry Oldenburg	15 April 1655	Original letter. 1 leaf, 4o	German	Summarised in <i>Correspondence</i> , vol. 6, p. 417. Published in <i>Oldenburg</i> , vol. 1, pp. 67–9
BL 3, fols. 11–12	Joseph Glanvill to Boyle	25 Jan. [1678]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 15–16

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fols. 13–14	Joseph Glanvill to Boyle	24 Feb. [1678]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 37–8
BL 3, fols. 15–16	Joseph Glanvill to Boyle	2 Nov. [1677]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 467–8
BL 3, fols. 17–18	Joseph Glanvill to Boyle	[1662]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 54–5
BL 3, fols. 19–20	Charles Goodall to Boyle	29 Nov. [1668]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 118–22. Enclosing BL 2, fol. 104
BL 3, fols. 21–2	Valentine Greatrakes to Boyle	12 Sept. 1668	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 98–103
BL 3, fols. 23–32	Boyle to Henry Stubbe	9 March 1666	Version in hand F. 10 leaves (5 conjugate pairs), fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 93–107
BL 3, fols. 33–4	Boyle’s questionnaire concerning Greatrakes	[1666]	Original document in hand F. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 417. Published in R.E.W. Maddison, <i>The Life of the Hon. Robert Boyle</i> (London, 1969), pp. 124–6, and in Hunter, <i>Heads &amp; Inquiries</i> , pp. 31–2
BL 3, fols. 35–6	William III, King of England, to Etats Generaux des Provinces Unies	24 July 1690	Copy. 2 leaves, 8o	French	Summarised in <i>Correspondence</i> , vol. 6, p. 417.
BL 3, fol. 37	‘The Lady Isabel Hamiltons Motives to turn from Popery’	Late 17th century	Copy by Warr. 1 leaf, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 417.



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fols. 38–9	G. Havers to Whitaker	c 1662	Original letter. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 417. See <i>Works</i> , vol. 1, pp. lxx–lxxi
BL 3, fol. 40	J.O. van Hellwig to Boyle	? 1683	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 5, pp. 435–6
BL 3, fols. 41–2	Franciscus Mercurius van Helmont to Henry Oldenburg [with note by Oldenburg].	30 June 1674 NS: i.e. 20 June 1674 OS	Original letter. 2 leaves, fol. Bottom half of 2nd leaf cut away.	Dutch	Summarised in <i>Correspondence</i> , vol. 6, p. 417. Published in <i>Oldenburg</i> , vol. 11, pp. 39–41
BL 3, fols. 43–4	Paul Higgin to Boyle	26 Nov. 1681	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 276–8
BL 3, fols. 45–6	Joseph Hill to Boyle	20 April 1685	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, p. 114
BL 3, fols. 47–8	J. Hornius (Horne) to Samuel Hartlib	29 Nov. 1659	Scribal copy. 2 leaves, fol.	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 417. See also HP 16/2/21A–22B
BL 3, fols. 49–50	Christiaan Huygens to Sir Robert Moray	30 Sept. 1661 NS: i.e. 20 Sept. 1661 OS	Original letter. 2 leaves, 4o	French	See also BL 6, fols. 15–16 Summarised in <i>Correspondence</i> , vol. 6, pp. 417–18. Published in Huygens, <i>Oeuvres complètes</i> , vol. 22 (The Hague, 1950), pp. 71–3
BL 3, fols. 51–4	Christiaan Huygens to Sir Robert Moray	14 July 1662 NS: i.e. 4 July 1662 OS	Original letter. 4 leaves sewn together as paper book, 4o.	French	Summarised in <i>Correspondence</i> , vol. 6, p. 418. Published in Huygens, <i>Oeuvres complètes</i> , vol. 4 (The Hague, 1891), pp. 171–3

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fols. 55–6	Robert Huntington to Boyle	12 Jan. 1684	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 2–3
BL 3, fols. 57–8	Robert Huntington to Boyle	24 Jan. 1685	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, p. 101
BL 3, fols. 59–60	Robert Huntington to Boyle	21 Feb. 1685	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 105–6
BL 3, fols. 61–2	Robert Huntington to Boyle	20 March 1686	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 170–1
BL 3, fols. 63–4	Robert Huntington to Boyle	24 March 1685	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 108–9
BL 3, fols. 65–6	William Hussey to Boyle	8 May [1686]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 177–8
BL 3, fol. 67	Dr Hutton to Boyle	1 Sept. 1682	Original letter. 1 leaf, 4o	English	Published in <i>Correspondence</i> , vol. 5, p. 336
BL 3, fols. 68–9	Thomas Hyde to Boyle	20 May 1671	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 207–8
BL 3, fol. 70	Thomas Hyde to Boyle	23 Oct. 1671	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 220–1
BL3, fol. 71	Thomas Hyde to Boyle	31 July 1677	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 447–8
BL 3, fols. 72–3	Thomas Hyde to Boyle	3 Sept. 1676	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 426–7

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fol. 74	Thomas Hyde to Boyle	14 August 1677	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 450–2
BL 3, fol. 74a–b	Thomas Hyde to Boyle	22 Sept. 1677	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 457–9
BL 3, fols. 75–6	Thomas Hyde to Boyle	16 Oct. 1677	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 461–3
BL 3, fols. 77–8	Thomas Hyde to Boyle	29 Nov. 1677	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 469–70
BL 3, fols. 79–80	Thomas Hyde to Boyle	17 Feb. 1678	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 21–2
BL 3, fols. 81–2	Thomas Hyde to Boyle	2 August 1678	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 111–12
BL 3, fols. 83–4	Thomas Hyde to Boyle	24 Feb. 1684	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 6–7
BL 3, fol. 85	Thomas Hyde to Boyle	23 Sep. 1684	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 42–3
BL 3, fols. 86–7	Thomas Hyde to Boyle	25 Oct. 1688	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 274–5
BL 3, fol. 88	Thomas Hyde to Boyle	29 Dec. 1688	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 278–80
BL 3, fol. 89	Thomas Hyde to Boyle	23 Feb. 1689	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 284–6

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fols. 90–1	Thomas Hyde to Boyle	5 March 1691	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 330–2
BL 3, fols. 92–3	Thomas Hyde to Boyle	11 June 1691	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 334–5
BL 3, fol. 94	William Isaac to Boyle	? 1670	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 195–7
BL 3, fol. 95	Joseph Jelzickowski to Boyle	24 May 1679	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 5, pp. 152–6
BL 3, fol. 96	Richard Jones to Boyle	20 March 1660 NS: i.e. 10 March 1660 OS.	Original letter. 1 leaf, 4o	French	Published in <i>Correspondence</i> , vol. 1, pp. 405–7
BL 3, fol. 97	Richard Jones to Boyle	30 March 1658 NS: i.e. 20 March 1658 OS	Original letter. 1 leaf, 4o	French	Published in <i>Correspondence</i> , vol. 1, pp. 257–60
BL 3, fols. 98–9	Estienne Jöüamier to Boyle	23 Sept. 1690	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 310–11
BL 3, fols. 100–1	Henri Justel to unknown correspondent	10 Nov. 1677 NS: i.e. 31 Oct 1677 OS	Original letter. 2 leaves, 4o	French	Summarised in <i>Correspondence</i> , vol. 6, p. 418

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fols. 102–3	Henri Justel to Boyle	30 Jan. 1678 NS: i.e. 20 January 1678 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 16–17
BL 3, fols. 104–5	Henri Justel to Boyle	1 April 1684	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 10–12
BL 3, fols. 106–7	James Kirkwood to Boyle	5 Nov. 1687	Original letter. 2 leaves, fol. ?	English	Published in <i>Correspondence</i> , vol. 6, pp. 237–9
BL 3, fols. 108–9	James Kirkwood to William Wotton, enclosing copy of James Kirkwood to James Ramsey, Bishop of Ross, dated 15 December 1687	22 June 1702	Original letter; scribal copy of second letter. 2 leaves, fol.	English	Published in M. Hunter, <i>Robert Boyle by Himself and his Friends</i> (London, 1994), pp. 107–10. Letter to Ramsey published in <i>Correspondence</i> , vol. 6, pp. 349–51
BL 3, fols. 110–11	James Kirkwood to Boyle	15 Dec. 1687	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 241–2
BL 3, fols. 112–13	James Kirkwood to Boyle	27 Dec. 1687	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 242–4
BL 3, fols. 114–15	James Kirkwood to Boyle	13 July 1689	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 294–5
BL 3, fols. 116–17	James Kirkwood to Boyle	30 Oct. 1690	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 314–17
BL 3, fols. 118–20	‘An Answer to the Objection against Printing the Bible in Irish’ and James Ramsey, Bishop of Ross, to James Kirkwood	[1690] and 1 Sept. 1690	Scribal copies. 3 leaves (a conjugate pair and a single leaf), fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 346–9, 351–3



Ref.	Title	Date	Description	Language	Related material
BL 3, fols. 121–2	John Laughton to Rev. Mr Warton	10 April 1688	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 418
BL 3, fols. 123–4	Jean Le Clerc to [Boyle]	18 Feb. 1691	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 328–30
BL 3, fols. 125–32	Antoni van Leeuwenhoek to Boyle [including translation by Oldenburg]	28 July 1676	Original letter. 8 leaves (4 conjugate pairs, the first 2 folded together), fol.	Dutch	Published in <i>Correspondence</i> , vol. 4, pp. 416–25
BL 3, fols. 133–4	Antoni van Leeuwenhoek to Antoni Heinsius	10 August 1685 NS: i.e. 31 July 1685 OS	Extract. 2 leaves, fol.	French	Summarised in <i>Correspondence</i> , vol. 6, p. 418. Published in Leeuwenhoek, <i>Alle de Brieven</i> , vol. 5 (Amsterdam, 1957), pp. 270–5
BL 3, fols. 135–6	Antoni van Leeuwenhoek to Boyle	12 Jan. 1689	Original letter. 2 leaves, 4o	Dutch	Published in <i>Correspondence</i> , vol. 6, pp. 282–3
BL 3, fols. 137–47	Antoni van Leeuwenhoek to Royal Society	12 Jan. 1689 NS: i.e. 2 Jan. 1689 OS	Original letter. 10 leaves, sewn together as paper book, 4o.	Dutch	Summarised in <i>Correspondence</i> , vol. 6, p. 418. Published in Leeuwenhoek, <i>Alle de Brieven</i> , vol. 8 (Amsterdam, 1967), pp. 66–117
BL 3, fols. 148–9	[Le Febure] to [Boyle]	Late 17th century	Original letter. 2 leaves, 4o	French (Latin recipe)	Published in <i>Correspondence</i> , vol. 6, pp. 373–7
BL 3, fols. 150–5	Le Green to [Boyle]	19 Sep. 1682	Original letter. 6 leaves (folded together), 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 340–6
BL 3, fols. 156–7	Nicolas Lemery to Boyle	17 August 1682 NS: i.e. 7 August 1682 OS	Original letter. 2 leaves, 8o	French	Published in <i>Correspondence</i> , vol. 5, pp. 322–4

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fols. 158–9	Nicolas Lemery to Boyle	18 March 1687 NS: i.e. 8 March 1687 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 210–12
BL 3, fols. 160–1	Thomas Barlow to Boyle	12 July 1681	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> vol. 5, pp. 259–61
BL 3, fols. 162–3	Thomas Barlow to Boyle	26 August 1682	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 330–2
BL 3, fols. 164–5	Thomas Barlow to Boyle	2 July 1683	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 414–15
BL 3, fol. 166	Thomas Barlow to Boyle	10 Oct. 1683	Original letter. 2 leaves, 4o (bound as if a single folio leaf)	English	Published in <i>Correspondence</i> , vol. 5, pp. 430–1
BL 3, fols. 167–8	Thomas Barlow to Boyle	7 April 1684	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 12–13
BL 3, fols. 169–70	Thomas Barlow to Boyle	5 May 1684	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 23–4
BL 3, fols. 171–2	Thomas Barlow to Boyle	25 May 1684	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 27–9
BL 3, fols. 173–4	Thomas Barlow to Boyle	10 June 1684	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 30–3
BL 3, fols. 175–6	Thomas Barlow to Boyle	12 June 1684	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 33–6
BL 3, fol. 177	Thomas Barlow to Boyle	18 Oct. 1684	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 49–50

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fols. 178–9	Thomas Barlow to Boyle	28 Oct. 1684	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 87–8
BL 3, fols. 180–1	Thomas Barlow to Boyle	4 Nov. 1684	Original letter. 2 leaves, fol	English	Published in <i>Correspondence</i> , vol. 6, pp. 89–91
BL 3, fols. 182–3	Thomas Barlow to Boyle	29 Nov. 1684	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 92–4
BL 3, fols. 184–5	Thomas Barlow Boyle	14 Jan. 1686	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 156–7
BL 3, fols. 186–7	Thomas Barlow to Boyle	1 Oct. 1685	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 127–8
BL 3, fols. 188–9	Thomas Barlow to Boyle	4 Jan. 1687	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 204–5
BL 3, fol. 190	Obadiah Walker to unknown correspondent	1670s–1680s [date surmised: before 4 Jan. 1687]	Copy. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 205–7
BL 3, fols. 191–2	Thomas Barlow to Boyle	19 Jan. 1687	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 209–10
BL 3, fols. 193–4	Thomas Barlow to Boyle	22 Nov. 1686	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 198–200
BL 3, fols. 195–6	Thomas Barlow to Boyle	28 July 1687	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> . vol. 6, pp. 227–8

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fols. 197–8	Thomas Barlow to Boyle	2 April 1688	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 256–8
BL 3, fols. 199–200	Thomas Barlow to Boyle	Early 1680s [date surmised: late July 1683]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 418–19
BL 3, fols. 201–2	Thomas Barlow to Boyle	Early 1680s [date surmised: mid August 1682]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 328–9
BL 3, fols. 203–4	Henry Compton, Bishop of London, to Boyle	20 Sept. 1687	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, p. 235
BL 3, fols. 205–6	John Love to Boyle	21 Feb. 1688	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 249–51
BL 3, fols. 207–8	Richard Lower to Boyle	26 Nov. 1662	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 52–3
BL 3, fols. 209–10	Jacques Lucas to Boyle	28 Dec. 1675 NS: i.e. 18 Dec. 1675 OS	Original letter. 2 leaves, 8o	French	Published in <i>Correspondence</i> , vol. 4, pp. 403–4

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 3, fol. 211	Job Ludolf to Boyle	16 Feb. 1684 NS: i.e. 6 Feb. 1684 OS.	Original letter. 1 leaf, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 3–4
BL 3, fol. 212–3	William Fuller, Bishop of Limerick	3 Dec. 1665	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp.592–3

Volume 4

Correspondence M–P. At the start is a typed inventory of the volume’s contents. Date: 20th century. Also bound in are two manuscript lists of 19th-century date, one describing a different ordering of the letters from the current one.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fols. 1–2	William Mainston to Boyle	19 Dec. 1682	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, p. 369
BL 4, fols. 3–4	William Mainston to Boyle	15 May 1683	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 411–12
BL 4, fol. 5	Andreas Majoragius to Boyle	27 August 1688	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 263–5
BL 4, fols. 6–7	Bathsua Makin to Boyle	? 1681	Original letter. 2 leaves, 4o	Greek, Latin, Hebrew	Published in <i>Correspondence</i> , vol. 5, pp. 282–3
BL 4, fols. 8–9	John Mallet to Boyle	27 March 1655	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 185–7



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fols. 10–11	Marcello Malpighi to Carlo Antonio Ronchi	6 Feb. 1686 NS: i.e. 27 Jan. OS	Original letter. 2 leaves, fol.	Italian	Summarised in <i>Correspondence</i> , vol. 6, p. 418. Published in H.B. Adelman (ed.), <i>Correspondence of Malpighi</i> (5 vols., Ithaca, NY, 1975), vol. 3, pp. 1135–40
BL 4, fols. 12–13	Caspar March to Robert Plot	15 August 1684	Original letter, 2 leaves, 4o	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 418
BL 4, fols. 14–15	Narcissus Marsh to Henry Jones, Bishop of Meath	27 August 1681	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 267–8
BL 4, fols. 16–17	Narcissus Marsh to Boyle	27 Dec. 1681	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 280–1
BL 4, fols. 18–19	Narcissus Marsh to Boyle	8 April 1682	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 290–1
BL 4, fols. 20–1	Narcissus Marsh to Boyle	23 June 1682	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 296–8
BL 4, fols. 22–3	Narcissus Marsh to Boyle	30 Sept. 1682	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 347–8
BL 4, fols. 24	Narcissus Marsh to Boyle	17 Feb. 1683	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 386–8
BL 4, fols. 25–6	Narcissus Marsh to Boyle	30 April 1683	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 406–7
BL 4, fols. 27–8	Narcissus Marsh to Boyle	24 August 1685	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 124–6

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fols. 29–30	Narcissus Marsh to Boyle	22 March 1686	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 174–5
BL 4, fols. 31–2	Thomas Marshall to Boyle	24 Oct. 1676	Original letter. 1 leaf, 4o?	English	Published in <i>Correspondence</i> , vol. 4, p. 430
BL 4, fol. 33	Luigi Ferdinando Marsigli to Boyle	20 March 16 NS: i.e. 10 March 1686 OS	Original letter. 1 leaf, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 169–70
BL 4, fols. 34–5	John Skeffington, 2nd Viscount Massereene, to Boyle	15 Dec. 1680	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, p. 227
BL 4, fol. 36	Enclosure with previous letter describing celestial phenomena	14 Dec. 1680	Original document. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 5, p. 228
BL 4, fols. 37–8	John Skeffington, 2nd Viscount Massereene, to Boyle	8 Oct. 1690	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 312–13
BL 4, fol. 39	Streynsham Masters to Dr Masters	9 Dec. 1678	Scribal copy. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 445–7
BL 4, fols. 40–1	Increase Mather to John Lensden	12 July 1687	Scribal copy. 2 leaves, 4o	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 418
BL 4, fols. 42–3	John Matson to Boyle	18 May 1676	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 409–10
BL 4, fols. 44–5	Guy Mesmin to Boyle	24 Feb. 1680 NS: i.e. 14 Feb. 1680 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 182–5

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fol. 46	Guy Mesmin to Theodore Haak	25 May 1680 NS: i.e. 15 May 1680 OS	Original letter. 1 leaf, 4o	French	Summarised in <i>Correspondence</i> , vol. 6, p. 418.
BL 4, fols. 47–8	Guy Mesmin to Boyle	25 May 1680 NS: i.e. 15 May 1680 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 199–203
BL 4, fol. 49	Guy Mesmin to Boyle	24 April 1683 NS: i.e. 14 April 1683 OS.	Original letter. 1 leaf, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 403–4
BL 4, fols. 50–1	Guy Mesmin to Boyle	24 May 1684 NS: i.e. 14 May 1684.	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 24–7
BL 4, fols. 52–3	Guy Mesmin to Boyle	8 Dec. 1685 NS: i.e. 29 Nov 1685 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 138–41
BL 4, fols. 54–5	Guy Mesmin to [Boyle]	[1680]	Original letter [including book catalogue]. 2 leaves, 4o.	French	Published in <i>Correspondence</i> , vol. 5, pp. 232–5
BL 4, fol. 56	G. Mezier to Fotherby	20 April 1689	Copy in hand C. 1 leaf, fol.	French	Summarised in <i>Correspondence</i> , vol. 6, p. 418
BL 4, fols. 57–8	Henry Jones, Bishop of Meath, to Boyle	4 August 1680	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 207–9

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fols. 59–60	Henry Jones, Bishop of Meath, to Boyle	3 May 1681	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 252–5
BL 4, fols. 61–2	Henry Jones, Bishop of Meath, to Narcissus Marsh	1 August 1681	Scribal copy. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 265–6
BL 4, fols. 63–4	Henry Jones, Bishop of Meath, to Boyle	3 Sept. 1681	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 263–4
BL 4, fols. 65–6	Henry Jones, Bishop of Meath, to Boyle	5 Nov. 1681	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 271–3
BL 4, fols. 67–8	Anthony Dopping, Bishop of Meath, to Boyle	3 August 1682	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 318–19
BL 4, fols. 69–70	Anthony Dopping Bishop of Meath, to Robert Huntington	14 Dec. 1685	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 451–3
BL 4, fols. 71–2	Ludovicus Molitor to Boyle	Late 17th century	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 377–8
BL 4, fols. 73–4	F.L.B. d'E. de Mollondin to Boyle	11 Oct. 1685 NS: i.e. 1 Oct. 1685 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 128–31
BL 4, fols. 75–6	Sir Robert Moray to Boyle	15 July 1672	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 316–17
BL 4, fols. 77–8	Henry More to Boyle	5 June 1665	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 471–2

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fols. 79–80	Henry More to Boyle	27 Nov. [1665] [year surmised]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 589–90
BL 4, fols. 81–2	Robert Morison to Boyle	[1680]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 231–2
BL 4, fols. 83–4	Allen Mullen to Boyle	26 Feb. 1686	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 163–6
BL 4, fols. 85–6	John Nicholls to Boyle	12 Sept. 1657	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 234–8
BL 4, fols. 87–8	Henry Oldenburg to Boyle, 10 June 1663	c. 1740	Transcript by Henry Miles. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 2, pp. 85–7
BL 4, fol. 89	Boyle to Margaret Boyle, Countess of Orrery	28 Nov. 1682	Hand: Warr. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 360–1
BL 4, fols. 90–1	Comte d’Ostanne to Boyle.	5 Nov. [1690]	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 317–18
BL 4, fols. 92–3	Comte d’Ostanne to Boyle	9 June 1690	Original letter. 2 leaves, 8o	French	Published in <i>Correspondence</i> , vol. 6, pp. 304–5
BL 4, fols. 94–5	Nicolas Oudart to Boyle	22 August 1673 NS: i.e. 12 August 1673 OS	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 354–7 See also BL 6, fol. 88
BL 4, fols. 96–7	S. Pache to Boyle	13 July 1676 NS: i.e. 3 July 1676 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 4, pp. 413–16



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fols. 98–9	Denis Papin to Boyle	22 March 1681	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 246–9
BL 4, fols. 100–1	Giovanni [?] Pellegrini to Boyle	11 July 1686 NS: i.e. 1 July 1686 OS	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 185–8
BL 4, fols. 102–3	Sir John Percivall to Boyle	28 Oct. 1684	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 88–9
BL 4, fols. 104–5	James Drummond, 4th Earl of Perth, to Boyle	15 April 1685	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 112–13
BL 4, fol. 106	Georges Pierre to Boyle	23 Dec. 1677 NS: i.e. 13 Dec. 1677 OS	Original letter. 1 leaf, fol.	French	Published in <i>Correspondence</i> , vol. 4, pp. 470–5
BL 4, fols. 107–8	Georges Pierre to Boyle	27 Jan. 1678 NS: i.e. 17 Jan. 1678 OS	Original letter. 2 leaves, fol.	French	Published in <i>Correspondence</i> , vol. 5, pp. 5–13 See also BL 6, fols. 74–5
BL 4, fol. 109	Georges Pierre to Boyle	17 March 1678 NS: i.e. 7 March 1678 OS.	Original letter. 1 leaf, fol.	French	Published in <i>Correspondence</i> , vol. 5, pp. 43–8
BL 4, fols. 110–11	Georges Pierre to Boyle	24 March 1678 NS: i.e., 14 March 1678 OS	Original letter. 2 leaves, fol.	French	Published in <i>Correspondence</i> , vol. 5, pp. 48–59

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fols. 112–13	Georges Pierre to Boyle	11 Apr. 1678 NS: i.e. 1 April 1678 OS	Original letter. 2 leaves, fol.	French	Published in <i>Correspondence</i> , vol. 5, pp. 62–70
BL 4, fol. 114	Georges Pierre to Boyle	21 April 1678 NS: i.e. 11 April 1678 OS	Original letter. 1 leaf, fol.	French	Published in <i>Correspondence</i> , vol. 5, pp. 72–6
BL 4, fols. 115–16	Georges Pierre to Boyle	13 May 1678 NS: 3 May 1678 OS	Original letter. 2 leaves, fol.	French	Published in <i>Correspondence</i> , vol. 5, pp. 77–82
BL 4, fols. 117–18	Georges Pierre to Boyle	17 May 1678 NS: i.e. 7 May 1678 OS	Original letter. 2 leaves fol.	French	Published in <i>Correspondence</i> , vol. 5, pp. 84–9
BL 4, fols. 119–20	Georges Pierre to Boyle	30 May 1678 NS: i.e. 20 May 1678 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 91–5
BL 4, fols. 121–2	Georges Pierre to Boyle	24 July 1678 NS: i.e. 14 July 1678 OS	Original letter. 2 leaves, 8o	French	Published in <i>Correspondence</i> , vol. 5, pp. 107–9

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fols. 123–4	Georges Pierre to Boyle	20 August 1678 NS: i.e. 10 August 1678 OS	Original letter. 2 leaves, large 4o	French	See also BL 6, fol. 37. Published in <i>Correspondence</i> , vol. 5, pp. 112–14.
BL 4, fols. 125–6	Georges Pierre to Boyle	25 June 1678 NS: i.e. 15 June 1678 OS	Original letter. 2 leaves, large 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 97–102
BL 4, fols. 127–8	Georges Pierre to Boyle	28 Feb. [1678] NS: i.e. 18 Feb. [1678] OS	Original letter. 2 leaves, fol.	French	Published in <i>Correspondence</i> , vol. 5, pp. 23–36
BL 4, fol. 129	Edward Pococke to Boyle	3 Jan. 1661	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 444–5
BL 4, fols. 130–1	Edward Pococke to Boyle	13 March 1661	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 449–51
BL 4, fols. 132–3	Edward Pococke to Boyle	5 Oct. 1660	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 426–8
BL 4, fols. 134–5	Edward Pococke to Boyle	2 Dec. 1662	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 2, pp. 53–4
BL 4, fol. 136	Joachim Polemann to unknown correspondent.	12 Sept. 1659 NS: i.e. 2 Sept. 1659 OS	Scribal copy. 1 leaf, 4o	German	Summarised in <i>Correspondence</i> , vol. 6, p. 419. Copy in HP 16/1/23A

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 4, fols. 137	Joachim Polemann to unknown correspondent.	6 Feb. 1660 NS: i.e. 28 Jan. 1660 OS	Scribal copy. 1 leaf, fol.	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 419
BL 4, fols. 138–9	Etienne de Bottens Polier to Boyle	23 Dec. 1682 NS: i.e. 13 Dec. 1682 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 370–2
BL 4, fols. 140–1	Etienne de Bottens Polier to Boyle	24 March 1683 NS: i.e. 14 March 1683 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 395–7
BL 4, fols. 142–3	Etienne de Bottens Polier to Boyle	26 June 1686 NS: i.e. 16 June 1686 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 182–4
BL 4, fols. 144–5	Walter Pope to Boyle	10 Sept. 1659 NS: i.e. 31 Aug. 1659 OS	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 364–5
BL 4, fols. 146–7	Thomas Povey to Boyle	8 May 1661	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 453–4
BL 4, fols. 148–9	D. Emanuel Privvey to unknown correspondent	6 July 1679 NS: i.e. 27 June 1679 OS	Original letter. 2 leaves, 4o	French	Summarised in <i>Correspondence</i> , vol. 6, p. 419
BL 4, fols. 150–3	Daniel Puerari to Boyle	27 Feb. 1672	Original letter. 4 leaves (folded together), 4o	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 243–7

Volume 5

Correspondence R–W. At the start is a typed inventory of the volume’s contents. Date: 20th century. Also bound in are two manuscript lists of 19th-century date, one describing a different ordering of the letters from the current one.

Ref.	Title	Date	Description	Language	Related material
BL 5, fols. 1–2	Thomas Ramsay to Boyle	10 Dec. 1687	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> vol. 6, pp. 239–40
BL 5, fols. 3–4	Thomas Ramsay to Boyle	22 Aug 1689	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 298–300
BL 5, fols. 5–6	Thomas Ramsay to Boyle	11 Feb. 1691	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 326–7
BL 5, fols. 7–8	Thomas Ramsay to Boyle	? 1682	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 5, pp. 373–5
BL 5, fols. 9–10	William Randolph to [Boyle]	25 Feb. 1670	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 159–71
BL 5, fols. 11–12	Katherine Jones, Viscountess Ranelagh, to Boyle	29 July 1665	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 2, pp. 498–501
BL 5, fols. 13–14	Katherine Jones, Viscountess Ranelagh, to Boyle	9 Sept. 1665	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 2, pp. 525–6
BL5, fols. 15–16	Katherine Jones, Viscountess Ranelagh, to Boyle	6 August [1665] [year surmised]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 2, pp. 503–4
BL 5, fols. 17–18	Katherine Jones, Viscountess Ranelagh, to John Eliot	13 August 1676	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 419.
BL 5, fols. 19–20	Katherine Jones, Viscountess Ranelagh, to Boyle	7 January [1657] [year surmised]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 208–10



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fols. 21–4	Katherine Jones, Viscountess Ranelagh, to Boyle	14 Sept. [1652] [year surmised]	Original letter. 4 leaves (2 conjugate pairs), 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 135–8
BL 5, fols. 25–6	Katherine Jones, Viscountess Ranelagh, to Boyle	18 Sept. [1666] [year surmised]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 3, pp. 239–40
BL 5, fols. 27–8	Katherine Jones, Viscountess Ranelagh, to Boyle	3 June [1657] [year surmised]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 215–16
BL 5, fols. 29–30	Katherine Jones, Viscountess Ranelagh, to Boyle	[1645] [date surmised]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 26–7
BL 5, fol. 31	Katherine Jones, Viscountess Ranelagh, to Boyle	12 Oct. [1655] [year surmised]	Original letter. 1 leaf, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 192–3
BL 5, fols. 32–5	Jo. Read to Boyle [enclosing copies of letters from Read to Thomas Williams, John Locke and Marchamont Nedham]	[1666]	Original letter enclosing copies of letters. 4 separate leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 2–14
BL 5, fols. 36–7	Jean Renaudot to Boyle	5 March 1689 NS; i.e. 24 Feb. 1689 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 287–8

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fols. 38–9	Jean Renaudot to Boyle	[1690]	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 320–2
BL 5, fols. 40–1	P. Repingon to Boyle	25 July 1687	Original letter. 2 leaves, fol.	French	Published in <i>Correspondence</i> , vol. 6, pp. 223–5
BL 4, fols. 42–3	Laurent Rinhuber to Boyle	24 Sept 1683	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 5, pp. 424–7
BL 5, fols. 44–5	Cardinal Carolus Robertius to unknown correspondent.	1 Oct. 1668	Copy. 2 leaves, 4o	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 419
BL 5, fols. 46–7	Carlo Rinaldini to Boyle	1 Sept. 1668 NS: i.e. 22 Aug. 1668 OS	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 91–5
BL 5, fol. 48	E. Rothmaler to Boyle	? 1685	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 149–50
BL 5, fols. 49–50	Edwin Sandys to Boyle	11 Feb. 1669	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 127–8
BL 5, fol. 51	Robert Sharrock to Boyle	13 Dec. 1661	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 470–1
BL 5, fols. 52–3	Andrew Sall to Boyle	17 Dec. 1678	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 133–6
BL 5, fols. 54–5	Andrew Sall to Boyle	5 April 1679	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 149–50
BL 5, fols. 56–7	Andrew Sall to Boyle	29 June 1679	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> . vol. 5, pp. 160–1

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fols. 58–9	Andrew Sall to Boyle	20 May 1680	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 203–5
BL 5, fols. 60–1	Andrew Sall to Boyle	26 Oct. 1680	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 219–21
BL 5, fols. 62–3	Andrew Sall to Boyle	7 Feb. 1682	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 287–9
BL 5, fol. 64	Andrew Sall to Boyle	8 Nov. 1681	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 273–4
BL 5, fols. 65–6	Andrew Sall to Boyle	19 Nov. 1681	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 274–6
BL 5, fols. 67–8	Andrew Sall to Boyle	13 Dec. 1681	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 278–80
BL 5, fols. 68(bis)	Johann Friedrich Schlezer to Boyle	14 March 1656	Original letter. 1 leaf, 4o	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 198–200
BL 5, fol. 69	Wilhelm Schröder to Boyle	7 Oct 1674 NS: i.e. 27 Sept. 1674 OS	Original letter. 1 leaf, 4o	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 390–3
BL 5, fols. 70–1	William Seaman to Boyle	5 Oct. 1664	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 341–2
BL 5, fols. 72–3	William Seaman to Boyle	19 Oct. 1664	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 353–4

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fols. 74–5	William Seaman to Boyle	1 May 1683	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 407–8
BL 5, fols. 76–7	Sephrozimez to Boyle	6 April 1678 NS: i.e. 27 March 1678 OS	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 5, pp. 59–61
BL 5, fols. 78–9	Manfredo Settala to unknown correspondent	4 June 1670 NS: i.e. 26 May 1670 OS	Original letter. 2 leaves, fol.	Italian	Published in <i>Correspondence</i> , vol. 6, pp. 429–33
BL 5, fol. 80	John Sadler to [Boyle?]	9 Aug. 1677	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 449–50
BL 5, fols. 81–2	Robert Sharrock to Boyle	26 Jan. 1660	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 398–400
BL 5, fol. 83	Robert Sharrock to Boyle	16 Feb. 1661	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 445–6
BL 5, fols. 84–5	Robert Sharrock to Boyle	21 Feb. 1661	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 446–8
BL 5, fols. 86–7	Robert Sharrock to Boyle	[Feb. or March 1661]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 448–9
BL 5, fols. 88–9	Robert Sharrock to Boyle	9 April 1660	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 410–11

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fol. 90	Robert Sharrock to Boyle	23 May 1660	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 411–12
BL 5, fol. 91	Robert Sharrock to Boyle	8 Nov. 1660	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 1, p. 436
BL 5, fols. 92–3	Robert Sharrock to Boyle	16 Dec. 1660	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 439–40
BL 5, fols. 94–5	Robert Sharrock to Boyle	29 Dec. 1660	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 440–2
BL 5, fols. 96–7	Robert Sharrock to Boyle	7 Jan. 1665	Original letter. 2 leaves, fol. ?	English	Published in <i>Correspondence</i> , vol. 2, pp. 448–9
BL 5, fol. 98	Robert Sharrock to Boyle	13 July 1664	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 293–4
BL 5, fols. 99–100	Robert Sharrock to Boyle	2 Oct. 1666	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 243–4
BL 5, fols. 101–2	Robert Sharrock to Boyle	[24] Nov. 1660	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 437–8
BL 5, fols. 103–9	Gothefredus von Sonnenberg to Boyle [with enclosed paper]	25 Oct. 1684	Original letter. 7 leaves (a single leaf followed by 3 conjugate pairs, the latter folded together), fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 52–86
BL 5, fols. 110–11	Gothefredus von Sonnenberg to Boyle	3 May 1685	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 116–21



Ref.	Title	Date	Description	Language	Related material
BL 5, fols. 112–13	Gothefredus von Sonnenberg to Boyle	3 August [1684] NS: i.e. 24 July [1684] OS	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 39–41
BL 5, fols. 114–15	Sir Robert Southwell to Boyle	16 July 1658	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 285–6
BL 5, fols. 116–17	Robert Southwell to Boyle	20 March 1676	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 407–8
BL 5, fol. 118	John Spalding to Boyle	28 June 1690	Original letter. 1 leaf, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 306–7
BL 5, fols. 119–20	John Spalding to Boyle, 28 June 1690, Boyle to James Kirkwood dated 18 October 1690, ‘An Account of the Design of Printing 3000 Bibles in Irish for the Use of the Highlanders’ [1689] and Presbytery of Ross to James Kirkwood dated 15 October 1688	c. 1702	Scribal copies, including a copy of the previous item. 2 leaves, fol.	English	See also BL 3, fols. 108–9, 118–20. Published in <i>Correspondence</i> , vol. 6, pp. 306–7, 313–14, 344–6, 353–4, respectively
BL 5, fols. 121–2	Note concerning distribution of New Testaments in Highlands of Scotland	c. 1690	Hand: Warr. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, p. 355
BL 5, fol. 123	Ezechiell Spanheim to Boyle	Late 17th century	Original letter. 1 leaf, fol.	French	Published in <i>Correspondence</i> , vol. 6, pp. 378–9

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fols. 124–5	Willem Spannut to Boyle	12 Dec. 1664	Original letter. 2 leaves, 4o?	Latin	Published in <i>Correspondence</i> , vol. 2, pp. 436–9
BL 5, fol. 126	James Stansfield to Samuel Hartlib	Late 17th century	Scribal copy. 1 leaf, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 419. Published on Hartlib CD-ROM
BL 5, fols. 127–8	Edward Stillingfleet to Boyle	6 Oct. 1662	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 49–51
BL 5, fols. 129–30	George Starkey to Boyle	3 Jan. 1652	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 107–11
BL 5, fols. 131–2	George Starkey to Boyle	16 Jan. 1652	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 111–18
BL 5, fols. 133–4	George Starkey to Boyle	26 Jan. 1652	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 118–26
BL 5, fols. 135–6	George Starkey to Boyle	3 Feb. 1652	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 126–32
BL 5, fols. 137–8	John Christoph Sturm to Boyle	1 March 1688 NS: i.e. 20 Feb. 1688 OS	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 246–9
BL 5, fols. 139–43	H. de Thevenot to Boyle	Late 17th century	Original letter enclosing a recipe in Latin. 4 leaves (bifoliate enclosing another) and a slip of paper, 4o	French (Latin recipe)	Published in <i>Correspondence</i> , vol. 6, pp. 379–82
BL 5, fol. 144	Ezreel Tonge to Boyle	17 March 1666	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 116–17

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fols. 145–6	Daubeney Turbeville to Boyle	6 Oct. 1664	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 348–9
BL 5, fol. 147	Daubeney Turbeville to Boyle	17 Nov. 1664	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 405–6
BL 5, fols. 148–52	Paolo Ulpiani to an unknown correspondent	30 April 1661 NS: i.e. 20 April 1661 OS	Original letter. 5 leaves (two conjugate pairs folded together and 1 separate leaf), fol.?	Italian	Summarised in <i>Correspondence</i> , vol. 6, p. 419
BL 5, fol. 153	Johann Brün (Unmussig) to Boyle	1 March 1654	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 163–5
BL 5, fols. 154–5	Johann Brün (Unmussig) to Boyle	3 Sept. 1655	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 1, pp. 187–8
BL 5, fols. 156–7	Victor Amadeo to William III	2 June 1690	Copy. 2 leaves, 4o	French	Summarised in <i>Correspondence</i> , vol. 6, p. 419
BL 5, fols. 158–9	Victor Amadeo to William III	2 June 1690	Copy. 2 leaves, 4o	French	Summarised in <i>Correspondence</i> , vol. 6, p. 419
BL 5, fols. 160–1	Jean Rodolf Villadin to Boyle	11 Feb. 1683 NS: i.e. 1 Feb. 1683 OS	Original letter. 2 leaves, large 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 384–6
BL 5, fols. 162–3	Jean Rodolf Villadin to Boyle	17 May 1683 NS: i.e. 7 May 1683 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 408–11

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fols. 164–5	Giacomo Viscardo to Boyle	26 March 1686 NS: i.e. 16 March 1686 OS	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 171–3
BL 5, fols. 166–7	Vincenzio Viviani to Sir Robert Southwell	6 Oct. 1660	Original letter. 2 leaves, fol.	Italian	Published in <i>Correspondence</i> , vol. 1, pp. 431–4
BL 5, fols. 168–9	Vincenzio Viviani to ‘Gran Duca’	Late 17th century	Original letter. 2 leaves, fol.	Italian	Summarised in <i>Correspondence</i> , vol. 6, p. 419
BL 5, fols. 170–1	John Wallis to Sir Robert Moray	6 May 1662	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 428–9
BL 5, fols. 172–3	John Wallis to Boyle	29 April 1665	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 2, pp. 464–5
BL 5, fols. 174–5	John Wallis to Boyle	17 July 1669	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 140–4
BL 5, fol. 176	John Warr, sen. to Boyle	? 1678	Original letter. 1 leaf, fol.	Latin	Published in <i>Correspondence</i> , vol. 5, pp. 136–7
BL 5, fols. 177–8	Edward Warren to Dr Goodall	Late 17th century [dated ‘26 Sept.’ but without a year]	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 420
BL 5, fols. 179–80	Mary Rich, Countess of Warwick, to Boyle	30 July [1673]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 353–4

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fols. 181–2	Mary Rich, Countess of Warwick, to Boyle	29 Dec. [1677]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 4, pp. 481–2
BL 5, fols. 183–4	Mary Rich, Countess of Warwick, to Boyle	[Late 1663]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 2, p. 234
BL 5, fols. 185–6	Mary Rich, Countess of Warwick, to Boyle	[Late 1656]	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 205–6
BL 5, fols. 187–8	Richard Whiteway to Boyle	12 Oct. 1667	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 351–3
BL 5, fols. 189–90	Heneage Finch, 2nd Earl of Winchelsea, to Boyle	17 Dec. 1682	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, p. 368
BL 5, fols. 191–2	Heneage Finch, 2nd Earl of Winchelsea, to Boyle	13 Oct. 1685	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 3–4
BL 5, fols. 193–4	Heneage Finch, 2nd Earl of Winchelsea, to Boyle	16 June [1689]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, p. 293
BL 5, fol. 195	Henry Wilson to Boyle	27 May 1679 NS: i.e. 17 May 1679 OS	Original letter. 1 leaf, 4o?	German	Published in <i>Correspondence</i> , vol. 5, pp. 150–2
BL 5, fol. 196	Hermann Wingendorp to [Boyle]	1 May 1689	Original letter. 1 leaf, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 289–91
BL 5, fols. 197–8	John Winthrop to Boyle	27 July 1662	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 31–2



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 5, fol. 199	Enclosure with preceding: account of Indian corn	[1662]	Original document. 4 leaves (2 conjugate pairs folded together), fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 32–9

Volume 6

Miscellaneous correspondence. At the start is a typed inventory of the volume’s contents. Date: 20th century. Also bound in are two manuscript lists of 19th-century date, one describing a different ordering of the letters from the current one.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 6, fols. 1–2	Boyle to Lady Elizabeth Hussey	6 June 1648	Copy by John Jay. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 69–71
BL 6, fol. 3	Robert Boyle, ‘An Invitation to Communicativeness’	23 July 1649	1 leaf, fol.	English	Published in <i>Works</i> , vol. 1, pp. cxiii–cxiv
BL 6, fol. 4	[Katherine Jones, Lady Ranelagh] to [Samuel Hartlib?]	3 April 1658	Scribal copy. 1 leaf, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 420. This and the following three items published on Hartlib CD-ROM
BL 6, fol. 5	John Beale to [Samuel Hartlib?]	4 June 1658	Scribal copy. 1 leaf, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 420
BL 6, fol. 6	John Beale to [Samuel Hartlib?]	17 August 1658	Scribal copy. 1 leaf, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 420
BL 6, fols. 7–8	G. H[orne] to [Samuel Hartlib?]	25 April 1659	Scribal copy. 2 leaves, 4o	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 420. Partly in HP 16/2/30A
BL 6, fols. 9–10	Henry Oldenburg to [Boyle]	7 May 1659 NS: i.e. 27 April 1659 OS	Scribal copy. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 341–3

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 6, fols. 11–12	John Wallis to Boyle	14 March 1662	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 7–11
BL 6, fols. 13–14	Newsletters from Cleves and Amsterdam	7–8 Sept. 1661 NS: i.e. 28–29 August 1661 OS	Scribal copies. 2 leaves, fol.	English, Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 420
BL 6, fols. 15–16	Christiaan Huygens to Sir Robert Moray	30 Sep. 1661 NS: i.e. 20 Sept. 1661 OS	English translation. 2 leaves, 4o	English	See BL 3, fols. 49–50 Summarised in <i>Correspondence</i> , vol. 6, p. 420. Published in Huygens, <i>Oeuvres complètes</i> , vol. 22 (The Hague, 1950), pp. 71–3
BL 6, fols. 17–18	Unknown correspondent to Frederick Clodius	21 April 1662	Original letter. 2 leaves, fol.	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 420.
BL 6, fols. 19–20	Unknown correspondent to Boyle	26 April 1665	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 2, pp. 463–4
BL 6, fol. 21	R. W[harton] to unknown correspondent	23 Jan. 1677	Scribal copy. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 433–4
BL 6, fols. 22–3	Unknown correspondent to ‘Madame’	11 Feb. 1677 NS: i.e. 1 Feb. 1677 OS	Original letter. 2 leaves, fol.	French	Published in <i>Correspondence</i> , vol. 6, pp. 434–40
BL 6, fols. 24–5	Unknown correspondent to Boyle	11 Sept. 1676	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 4, pp. 427–8

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 6, fol. 26	Boyle to Joseph Glanvill	10 Feb. 1678	Draft in Warr's hand. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 20–1
BL 6, fols. 27–8	[Benjamin Worsley] to [Boyle]	25 August 1677	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 4, pp. 452–4
BL 6, fols. 29–30	[John Goad] to Boyle	Jan. 1678	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 4–5
BL 6, fols. 31–2	[John Goad] to Boyle	June 1678	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 95–6
BL 6, fols. 33–4	Henri Justel to Boyle	21 May 1678 NS: i.e. 11 May 1678 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 89–91
BL 6, fols. 35–6	Unknown correspondent to Boyle	28 May 1676	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 410–13
BL 6, fol. 37	[Attempt to decipher BL 4, fols. 123–4]	Late 17th century	1 leaf, fol.	French	
BL 6, fol. 38	Boyle to [Robert Huntington]	10 Dec. 1673	Draft in Warr's hand. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 373–4
BL 6, fols. 39–40	[Guy Mesmin] to Boyle	11 Jan. 1679 NS: i.e. 1 Jan. 1679 OS	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 5, pp. 139–41

Ref.	Title	Date	Description	Language	Related material
BL 6, fols. 41–2	de Saingermain to Boyle	26 Feb. 1680 NS: i.e. 16 Feb. 1680 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 185–90
BL 6, fols. 43–5	Unknown correspondent to Boyle	17 July 1680 NS: i.e. 7 July 1680 OS	Original letter. 2 leaves, 4o; with cover sheet, fol.	French	Published in <i>Correspondence</i> , vol. 5, pp. 205–7
BL 6, fols. 46–7	E. Rothmaler to Boyle	1685	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 147–9
BL 6, fols. 48–9	de Saingermain to Boyle	14 April 1685	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 109–12
BL 6, fols. 50–1	de Saingermain to Boyle	25 Dec. 1685 NS: i.e. 15 Dec. 1685 OS	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 6, pp. 141–6
BL 6, fol. 52	Boyle to Gilbert Burnet	10 July 1686	Hand: Warr. 1 leaf, fol.	English	See also BL 1, fol. 134. Published in <i>Correspondence</i> , vol. 6, pp. 188–90
BL 6, fol. 53	P.S. to unknown correspondent	29 April 1688	Copy in hand of Bacon. 1 leaf, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 420.
BL 6, fols. 54–5	Sir Robert Southwell to Boyle	? 1661 [date surmised: before Sept. 1661?]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 457–60

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 6, fols. 56–7	Boyle to Henry Oldenburg	Late 17th century	Copy by Warr of BL 6, fols 97–8. 2 leaves, fol.	English pp. 359–60. See also BL 6. fols. 97–8, and BP 35, fol. 195	Published in <i>Correspondence</i> , vol. 6, pp. 359–60. See also BL 6. fols. 97–8, and BP 35, fol. 195
BL 6, fols. 58–9	Boyle to Robert Thompson	5 March 1677	Draft in Warr’s hand. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 436–8
BL 6, fols. 60–1	Daubeney Turbeville to Boyle	c. Oct. 1664	Original letter and recipe in Latin. 2 leaves, fol.	English (recipe in Latin)	Published in <i>Correspondence</i> , vol. 2, pp. 377–9
BL 6, fols. 62–5	[John Clayton] to [Boyle]	c. 1687 [date surmised: after 2 July 1687]	Original letter. 4 leaves (2 conjugate pairs), fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 217–23
BL 6, fols. 66–7	Boyle to ‘Count’, perhaps Richard Barry, 2nd Earl of Barrymore	c. 1648–1649	Holograph document. 2 leaves, fol.	English	Published in <i>Works</i> , vol. 13, pp. 95–7
BL 6, fols. 68–9	Boyle to Thomas Barlow [after 18 Oct. 1684]; on verso Boyle to Sir Henry Waddington dated 17 June 1684.	[17 June 1684 and after 18 Oct. 1684]	Hand: Warr. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 36, 50–2
BL 6, fols. 70–1	A Privy Counsellor of Elector of Brandenburg to Samuel Hartlib	Late 17th century	Scribal copy. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 420. Copy in HP 19/1/9A–B
BL 6, fols. 72–3	Unknown correspondent to Frederick Clodius	Late 17th century	Original letter. 2 leaves, 4o	German	Summarised in <i>Correspondence</i> , vol. 6, p. 420



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 6, fols. 74–5	Philalette to Pierre	[1678]	Original letter. 2 leaves, 8o	French	Enclosed with BL 4, fols. 107–8. Published in <i>Correspondence</i> , vol. 5, pp. 13–14.
BL 6, fols. 76–7	B.R. to Boyle	[1678]	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 115–16
BL 6, fols. 78–9	[Le Green] to Boyle	17 August [1682]	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 326–8
BL 6, fols. 80–1	[Le Green] to [Boyle]	[1682]	Original letter. 2 leaves, 4o	French	Published in <i>Correspondence</i> , vol. 5, pp. 324–6
BL 6, fol. 82	Cardinal de Medici to unknown correspondent	Late 17th century	Scribal copy. 1 leaf, fol.	Italian	Summarised in <i>Correspondence</i> , vol. 6, p. 421
BL 6, fols. 83–4	[Wilhelm Schröder] to [Boyle]	c. Oct. Nov. 1686	Original letter. 2 leaves, 4o	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 194–7
BL 6, fol. 85	J. H[orne] to Samuel Hartlib	24 March 1659 NS: i.e. 14 March 1659 OS	Scribal copy. 1 leaf, 4o	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 421. Copy in HP 16/2/23A–B
BL 6, fols. 86–7	Unknown correspondent to Boyle	Late 17th century	Original letter. 2 leaves, fol.	Latin	Published in <i>Correspondence</i> , vol. 6, pp. 382–9
BL 6, fol. 88	List of books by G.B. Pacichelli	[1673]	[Enclosure with Oudart to Boyle, 22 August 1673.] 1 leaf, fol.	Latin	See BL 4, fols. 94–5. Published in <i>Correspondence</i> , vol. 4, pp. 358–9.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 6, fols. 89–90	A.W. Andersone et al. to Boyle	c. 1690	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 6, pp. 319–20
BL 6, fols. 91–2	John Leverett et al. to Boyle	10 May 1673	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 347–51
BL 6, fols. 93–4	[Boyle] to [John Eliot]	c. 1680 [date surmised: before 15 Nov. 1680]	Hand: Warr. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 224–5
BL 6, fol. 95	Boyle to unknown correspondent	Late 17th century	Prefatory letter. Hand: Slare. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 360–1
BL 6, fol. 96	Richard Cony to Boyle	24 Oct. [1670]	Copy by Slare. 1 leaf, fol.	English	See BL 2, fols. 37–8. Published in <i>Correspondence</i> , vol. 4, pp. 194–5
BL 6, fols. 97–8	Boyle to Henry Oldenburg	Late 17th century	Copy by Bacon. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 359–60. See also BL 6, fols. 56–7; BP 35, fol. 195
BL 6, fols. 99–100	George Starkey to Boyle	[1651] [date surmised: after 19 April 1651]	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 1, pp. 90–103. See also BP 30, pp. 499–506

Volume 7

Supplementary set of letters assembled by Henry Miles, with a list of contents in his hand and a note dated 23 April 1747 ( the latter published in *Correspondence*, vol. 1, p. xix). Formerly MS 586 in the general series of Royal Society manuscripts, it is similar to Early Letters OB, a further compilation by Miles which was formerly MS 585. It has a typed list of contents matching those to the other volumes of Boyle Letters (and a title page in pencil). Nos. 1–15 of this volume are published on the Hartlib CD-ROM.

Ref.	Title	Date	Description	Language	Related material
BL 7, no. 1	[Benjamin Worsley] to Samuel Hartlib	28 May 1649 NS: i.e. 18 May 1649 OS	Copy in Hartlib’s hand. Also includes related items. 3 leaves (1 conjugate pair and 1 single leaf), 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421. For a full version of the second extract see HP 1/2/7A–8B
BL 7, no. 2	[? Ditto] to Samuel Hartlib	11 June 1649 NS: i.e. 1 June 1649 OS	Copy in Hartlib’s hand. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421.
BL 7, no. 3	John Beale to Samuel Hartlib and other copy letters	18 Jan. 1657 and 17, 27 Jan. 1658	Scribal copy. 1 leaf, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421. Part of one letter in HP 47/3/1A; another in HP 52/73
BL 7, no. 4	Misc. copy letters to Samuel Hartlib	20 and 26 Jan. 1657	Scribal copies. 2 leaves, fol. Latin	English,	Summarised in <i>Correspondence</i> , vol. 6, p. 421. For another copy see British Library Add. MS 4365, fol. 365
BL 7, no .5	John Beale to Robert Wood [including ‘Mr. Woods Answer’]	14 August and 8 Sept. 1657	Scribal copy. 3 leaves (1 single leaf and 1 conjugate pair), 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421. See HP 31/1/32–3, 33/1/27
BL 7, no. 6	John Beale ‘For Mr. Austin’	28 August and 8 Sept. 1657	Scribal copy. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421. See HP 42/1/34A–35B

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 7, no. 7	John Beale to unknown correspondent	11 and 15 Sept. 1657	Scribal copy. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421. For another copy of the second extract see HP 31/1/51
BL 7, no. 8	John Beale to [Samuel Hartlib]	9 April 1658	Scribal copy. 3 leaves (1 conjugate pair and 1 single leaf), 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421. See HP 52/73 and 52/137A–140B
BL 7, no. 9	John Beale to [Austen]	21 May 1658	Scribal copy. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421. Incomplete original in HP 52/61
BL 7, no. 10	John Beale to unknown correspondent	6 July 1658	Scribal copy. 1 leaf, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421.
BL 7, no. 11	John Beale to unknown correspondent	10 and 15 Sept. 1658	Scribal copy. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421. For the first extract see HP 51/15A; for the second, HP 64/21/1A
BL 7, no. 12	John Beale to [Austen]	16 Sept. 1658	Scribal copy. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421. See HP 15/19A, 52/171B–172B
BL 7, no. 13	John Beale to unknown correspondent	6 March 1659	Scribal copy. 4 leaves (2 conjugate pairs), 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 421.
BL 7, no. 14	Ezreel Tongue and John Beale to [Samuel Hartib]	4 July and 21 July 1659	Scribal copy. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422. See HP 65/18/5A–B and 65/18/6A–B

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 7, no. 15	[Petrus Figulus] to Samuel Hartlib	11 July 1659 NS: i.e., 1 July 1659 OS	Scribal copy. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422. See HP 8/9/6A–7A
BL 7, no. 16	Richard Jones to [Samuel Hartlib]	13 Dec. 1659 NS: i.e. 3 Dec. 1659 OS	Scribal copy. 1 leaf, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422 . Cf. HP 44/9/1A–B
BL 7, no. 17	Sir Robert Southwell to Henry Oldenburg	1 March 1660 NS: i.e. 21 Feb. 1660 OS	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, 422. Published in <i>Oldenburg</i> , vol. 1, pp. 355–6
BL 7, no. 18	Sir Robert Moray to Boyle	11 Oct. 1661	Original letter. 2 leaves, 4o	English	Published in <i>Correspondence</i> , vol. 1, pp. 463–4
BL 7, no. 19	Henry Power to William Croone	27 Oct. 1661	Original letter. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.
BL 7, no. 20	Sir Robert Southwell to Henry Oldenburg	15 May 1663	Original letter. 4 leaves (2 conjugate pairs), fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422. Published in <i>Oldenburg</i> , vol. 2, pp. 52–5
BL 7, no. 21	Sir James Long to Henry Oldenburg	22 Oct. 1663	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422. Published in <i>Oldenburg</i> , vol. 2, pp. 121–2
BL 7, no. 22	James Long to Henry Oldenburg	13 April 1664	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422. Published in <i>Oldenburg</i> , vol. 2, pp. 171–3.



<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 7, no. 23	Nathaniel Foxcroft to Boyle	11 Sept. 1666, with fol. postscript dated 18 Oct.	Original letter. 4 leaves (2 conjugate pairs),	English	Published in <i>Correspondence</i> , vol. 3, pp. 221–34
BL 7, no. 24	Andrew Clenche to Boyle	1 August 1667	Original letter. 2 separate leaves, fol.	English	Published in <i>Correspondence</i> , vol. 3, pp. 322–4
BL 7, no. 25	John Wallis to Robert Wood	10 March 1670	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.
BL 7, no. 26	John Wallis to Robert Wood	4 August 1670	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.
BL 7, no. 27	Daniel George Morhof to Henry Oldenburg	3 Nov. 1670	Original letter. 2 leaves, fol.	Latin	Summarised in <i>Correspondence</i> , vol. 6, p. 422. Published in <i>Oldenburg</i> , vol. 7, pp. 229–34
BL 7, no. 28	Unknown correspondent to Boyle	26 Oct. 1675	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 398–9
BL 7, no. 29	Francis Parker to Dr Micclethwaite	20 July 1676	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.
BL 7, no. 30	John Sadler to Boyle	28 March 1678	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 61–2
BL 7, no. 31	James Gordoun to Boyle	3 Nov 1679	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 165–8
BL 7, no. 32	James Gordoun to Katherine Jones, Viscountess Ranelagh	29 June 1680	Original letter. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.
BL 7, no. 33	Thomas Lloyd to unknown correspondent	31 July 1682	Original letter. 1 leaf, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 7, no. 34	Thomas Broughton to William Avery	25 Sept. 1682	Original letter. 1 leaf, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.
BL 7, no. 35	Allen Mullen to Boyle	2 Dec. 1682	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 361–5
BL 7, no. 36	Hezekiah Usher to Boyle	8 Dec. 1682	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 5, pp. 365–7
BL 7, no. 37	George Shove to unknown correspondent	4 April 1684	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.
BL 7, no. 38	Edward Randolph to Boyle	13 Oct. 1684	Original letter. 4 leaves (2 conjugate pairs), fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 44–7
BL 7, no. 39	Francis Jessop to Francis Aston	19 Oct. 1685	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, 449–51
BL 7, no. 40	Lodowick Jackson to Boyle [enclosing printed advertisement]	27 Sept. 1686	Original letter. 1 leaf, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 191–4
BL 7, no. 41	Patrick Adair to Boyle	13 Jan. 1687	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 207–9
BL 7, no. 42	Edward Southwell to Edmond Halley	7 April 1688	Scribal copy. 4 leaves folded together as paper book, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.
BL 7, no. 43	John Harrison to Boyle	9 Sept. 1688	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 265–9
BL 7, no. 44	John Harrison to Boyle	5 Oct. 1688	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 271–3

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BL 7, no. 45	Patrick Adair to Boyle	15 Nov. 1688	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 276–8
BL 7, no. 46	William Cole to Richard Waller	25 Oct. 1689	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 453–6
BL 7, no. 47	William Cole to Richard Waller	25 Oct. 1689	Copy of previous item in hand of Greg. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 453–6
BL 7, no. 48	William Cole to Boyle	29 Nov. 1689	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 6, pp. 300–1
BL 7, no. 49	Miles Symner to unknown correspondent	? 1654	Probably a copy. 1 leaf, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422.
BL 7, no. 50	Copy letters from Dury, Culpeper and Worsley	Mid 17th century	Scribal copies. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 422. Dury letter in HP 8/32/1A
BL 7, no. 51	Maurice Lund to Sir Maurice Berkeley	Late 17th century	Original letter. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 423.
BL 7, no. 52	Maurice Lund to Sir Maurice Berkeley	Late 17th century	Original letter. 2 leaves, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 423
BL 7, no. 53	Miscellaneous recipes, extracts etc. [including letters from Serrarius and Dury to Hartlib, September 1661]	[1661]	Hand: Clodius. 4 leaves folded together as paper book, 4o	English	Summarised in <i>Correspondence</i> , vol. 6, p. 423. For one of the recipes see HP 66/8/5A and 66/9/5B
BL 7, no. 54	‘Matters and Experiments recommended to the care of Mr. Robert Boyle’ [by the Royal Society]	[Early 1660s]	Scribal hand. 1 leaf, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 423.

<i>Ref.</i>	<i>Title</i>	<i>Date</i>	<i>Description</i>	<i>Language</i>	<i>Related material</i>
BL 7, no. 55	John Beale to Samuel Hartlib	Late 17th century	Scribal copy. 4 leaves (2 conjugate pairs), fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 423.
BL 7, no. 56	Sir Robert Southwell to Henry Oldenburg	19 Sept. 1661	Original letter. 2 leaves, fol.	English	Summarised in <i>Correspondence</i> , vol. 6, p. 423. Published in <i>Oldenburg</i> , vol. 1, pp. 433–5
BL 7, no. 57	J. Durant to Boyle	9 Feb. 1674	Original letter. 2 leaves, fol.	English	Published in <i>Correspondence</i> , vol. 4, pp. 379–81



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In order to keep this index to manageable proportions, a choice has often had to be made between indexing items by subject matter or by their location in Boyle's writings. When in doubt, priority has been given to entries of the latter type rather than the former, on the grounds that such a record is most likely to be of value to users of this volume.

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